

Office of Water Meeting Request Form	
Request Status - This section is auto populated by the system	
Created by	Huff, Lisa
Created	6/15/2021 10:45:03 AM
Request ID	199
Request status	Office Director Approved
Meeting details	
What is your role?	Division Director / Deputy
Requesting program office*	OST
Meeting title*	Steam Electric 2020 Rule Decision for Reconsideration
Who is this for? *	<input checked="" type="checkbox"/> Benita Best-Wong <input checked="" type="checkbox"/> Radhika Fox
Purpose of the meeting Please note any urgency related to the meeting timeframe Example: Programmatic decision, presentation, informational update, engagement meeting, interagency meeting, etc...	Pre-brief for AA needed 6/21 in preparation for Administrator's briefing 6/24; EPA must inform court on 7/26 re: Steam Electric 2020 Rule if it intends to revise the effluent limitations guidelines.
Information sharing only? If yes, explain:	No
Is a decision needed? If yes, explain:	Yes EPA must inform the Fourth Circuit by July 26, 2021 if it intends to revise the Steam Electric 2020 Rule effluent limitations guidelines.
Earliest date staff will be ready for this meeting by *	6/21/2021
Latest date meeting can happen by*	6/21/2021
Time needed for meeting*	1 hour
Other comments	
Required attendees*	Hoffer, Melissa; Nagle, Deborah; Wood, Robert; Scozzafava, MichaelE; Damico, Brian; Benware, Richard; Huff, Lisa; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Flanders, Phillip; Allen, Ashley; Covington, James
Optional attendees	Weyer, Erica; Skane, Elizabeth; Aguirre, Janita
Non EPA attendees	

Message

From: Fox, Radhika [Fox.Radhika@epa.gov]
Sent: 7/26/2021 12:46:57 PM
To: Aguirre, Janita [Aguirre.Janita@epa.gov]
CC: Braschayko, Kelley [braschayko.kelley@epa.gov]
Subject: R.Fox_Steam Declaration 7.26.21.pdf
Attachments: R.Fox_Steam Declaration 7.26.21.pdf

No. 20-2187 (L)

)	
APPALACHIAN VOICES, et al.,)	
)	
Petitioners,)	
)	
v.)	
)	
UNITED STATES)	No. 20-2187 (L)
ENVIRONMENTAL PROTECTION)	
AGENCY, et al.,)	
)	
Respondents.)	
)	

I, Radhika Fox, declare that the following statements are true and correct to the best of my knowledge and belief and are based on my personal knowledge, information contained in the records of the United States Environmental Protection Agency (“EPA” or “the Agency”), and information supplied to me by current EPA employees.

ED 006652 00003671-00001

2. As Assistant Administrator, I am responsible for, and provide counsel to, the Administrator on policy, planning, program development and implementation, management, and control of the technical and administrative aspects of the Office of Water. I manage the Agency's programs under the Clean Water Act, Safe Drinking Water Act, and the Marine Protection, Research, and Sanctuaries Act.
3. Within EPA, the Office of Water has primary responsibility for the rulemaking process related to the Clean Water Act. Within the Office of Water, the Office of Science and Technology's Engineering Analysis Division has the responsibility for, among other things, developing effluent limitations guidelines and standards ("effluent guidelines") under sections 301, 304, 306, and 307 of the Clean Water Act.
4. I am responsible for overseeing EPA's promulgation of effluent guidelines. The Agency has promulgated effluent guidelines for 59 categories of industrial dischargers, including promulgation of the first effluent guidelines for the steam electric power-generating point-source category in 1974, which were most recently revised in 2015 and 2020.
5. Below, I explain the Agency's decision to initiate a rulemaking that will propose to revise the 2020 Steam Electric Reconsideration Rule. Today, I signed a Federal Register Notice announcing this decision to undertake a

rulemaking. At this time, EPA intends to sign a notice of proposed rulemaking in the Fall of 2022. EPA is undertaking this rulemaking to ensure that this important industrial sector is implementing the best available pollutant control technologies needed to advance the goal of the Clean Water Act to eliminate the discharge of all pollutants. While the Agency undertakes this new rulemaking, facilities will continue to be subject to the requirements of the 2015 Rule, as amended by the 2020 Rule, which are currently effective. In this way, the pollutant reductions accomplished by the existing Rules will occur while the Agency engages in rulemaking to consider more stringent requirements.¹

6. Following his taking office on January 20, 2021, President Biden signed Executive Order 13990, “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.” 86 Fed. Reg. 7037 (Jan. 20, 2021). The Order announces the following Administration policies:

to listen to the science; to improve public health and protect our environment; to ensure access to clean air and water; to limit exposure to dangerous chemicals and pesticides; to hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; to reduce greenhouse gas emissions; to bolster resilience to the impacts of climate change; to restore and expand our national treasures and monuments; and to prioritize both environmental justice and the creation of the well-paying union jobs necessary to deliver on these goals.

¹ Effluent limitations and standards are primarily implemented through NPDES permits issued to individual facilities under 33 U.S.C. § 1342. Pretreatment standards applicable to indirect dischargers are directly enforceable. *See* 33 U.S.C. § 1317(d).

7. The Executive Order further states that all agencies “shall immediately review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (agency actions) promulgated, issued, or adopted between January 20, 2017, and January 20, 2021, that are or may be inconsistent with, or present obstacles to,” the aforementioned policies. The Executive Order further directs that, “for any such actions identified by the agencies, the heads of agencies shall, as appropriate and consistent with applicable law, consider suspending, revising, or rescinding the agency actions.”
8. On January 25, 2021, the 2020 Steam Electric Reconsideration Rule was included in a non-exclusive list of 48 EPA actions identified by the White House for review pursuant to Executive Order 13990.²
9. The 2020 Rule promulgated revised effluent limitations and pretreatment standards for the steam electric industry. EPA had previously promulgated such effluent limitations and pretreatment standards in 2015, and the 2020 Rule revised the limits applicable to discharges of toxic and non-conventional pollutants found in two of the largest sources of wastewater in the industry: flue

² <https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/fact-sheet-list-of-agency-actions-for-review/>.

gas desulfurization wastewater and bottom ash transport water.³ The Rule also established three new subcategories, for which plants that qualify would be subject to less stringent limits than those that would otherwise apply. Finally, the Rule established new compliance dates, which in the case of the generally applicable limits, are as soon as possible beginning October 2021 and no later than December 2025, as determined by the permitting authority.

10. Clean Water Act section 301(b)(2)(A) requires that, by March 31, 1989, existing discharges of toxic and non-conventional pollutants must be limited based on “best available technology economically achievable . . . which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued . . . pursuant to section 304(b)(2) of the Act.” Furthermore, such limitations “shall require the elimination of discharges of all pollutants if the Administrator finds . . . that such elimination is technologically and economically achievable” for the industry, “as determined in accordance with regulations issued . . . pursuant to section 304(b)(2).” Section 304(b)(2) provides that “[f]actors relating to the assessment of best available technology shall take into account

³ Toxic pollutants are those listed as such under section 307(a) of the Clean Water Act. Conventional pollutants are those listed as such under section 304(a)(4) of the Act, as well as any additional pollutants defined by the Administrator as conventional, such as oil and grease. Non-conventional pollutants are those that are neither toxic nor conventional pollutants.

the age of equipment and facilities involved, the process employed, the engineering aspect of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.”

11. Consistent with Executive Order 13990 signed by President Biden, EPA has carefully reassessed the administrative record for and basis of the 2020 Steam Electric Rule. EPA has now completed its review under the Executive Order. Based on that review, EPA has decided to initiate a notice-and-comment rulemaking in which the Agency will determine whether more stringent limitations and standards are appropriate consistent with the technology-forcing statutory scheme and the goals of the Clean Water Act. For example, EPA is concerned that some pollution control technologies that the 2020 Rule found not to be technologically available, such as membrane filtration for control of pollutants in flue gas desulfurization wastewater, may, in fact, be able to be used by many steam electric power plants. EPA also intends to consider other aspects of the 2020 Rule, such as the requirements applicable to bottom ash transport water and the three subcategories, which are afforded less stringent limits than those otherwise applicable under the Rule, and determine whether revisions to those aspects of the 2020 Rule may be warranted.

I declare under penalty of perjury that the foregoing is true and correct, based on my personal knowledge and on information provided to me by employees of the EPA.

Dated: July 26, 2021

RADHIKA
FOX

Digitally signed by RADHIKA
FOX
Date: 2021.07.26 08:46:24
-04'00'

Radhika Fox
Assistant Administrator
Office of Water
U.S. Environmental Protection Agency

Office of Water Meeting Request Form	
Request Status - This section is auto populated by the system	
Created by	Huff, Lisa
Created	7/27/2021 6:42:45 PM
Request ID	107
Request status	Office Director Approved
Meeting details	
What is your role?	Division Director / Deputy
Requesting program office*	OST
Meeting title*	Steam Electric ELG Early Guidance
Who is this for? *	<input checked="" type="checkbox"/> Benita Best-Wong <input checked="" type="checkbox"/> Radhika Fox zabeth Cisar
Purpose of the meeting Please note any urgency related to the meeting timeframe Example: Programmatic decision, presentation, informational update, engagement meeting, interagency meeting, etc...	Pre-brief for Early Guidance briefing for the Administrator to provide information on potential scope of supplemental Steam Electric rulemaking. Declaration filed with the court on 8/26/21 said EPA would publish proposed rule in Fall 2022.
Information sharing only? If yes, explain	No
Is a decision needed? If yes, explain	Yes Provide guidance on the scope of the supplemental Steam Electric ELG including regarding what wastestreams to include.
Earliest date staff will be ready for this meeting by *	8/3/2021
Latest date meeting can happen by*	8/6/2021
Time needed for meeting*	1 hour
Other comments	
Required attendees*	Nagle, Deborah; Wood, Robert; Scozzafava, MichaelE; Huff, Lisa; Damico, Brian; Benware, Richard; Flanders, Phillip; Allen, Ashley; Covington, James; Corona, Joel; Levine, MaryEllen; Neugeboren, Steven; Hoffer, Melissa; Zomer, Jessica
Optional attendees	Weyer, Erica; Skane, Elizabeth; Sabater, Juan; Aguirre, Janita; Trombley, Michael; Akopian,
Non EPA attendees	Natalia;

Message

From: Weyer, Erica [weyer.eric@epa.gov]
Sent: 2/8/2021 6:23:53 PM
To: Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]
Subject: FW: Briefing package for 2pm meeting w/ Radhika tomorrow
Attachments: Steam Transition Briefing_20210208.pptx

FYI. I made two minor changes - I added "internal/deliberative" to the bottom of the slides + removed draft from the name.

From: Weyer, Erica
Sent: Monday, February 8, 2021 1:23 PM
To: Tiago, Joseph <Tiago.Joseph@epa.gov>; Laija, Emerald <Laija.Emerald@epa.gov>; Sabater, Juan <Sabater.Juan@epa.gov>; Penman, Crystal <Penman.Crystal@epa.gov>
Subject: Briefing package for 2pm meeting w/ Radhika tomorrow

Hi all,

Please find attached the PPT for tomorrow's briefing on Steam Electric with Radhika. Thanks for attaching to the invite.

Erica Weyer
Special Assistant and Regulatory Manager
Office of Science and Technology – Office of Water
U.S. Environmental Protection Agency
(202)566-2793



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

Printed on MM/DD/YYYY

Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

Attachment 1:

Wastestreams Regulated in the 2020 Steam Electric Reconsideration Rule

There are dozens of wastestreams at steam electric power plants. The 2015 rule focused primarily on seven specific wastestreams listed below and presented in the figure. Six of these wastestreams are generated at coal-fired power plants and are presented in the figure below.¹ For the 2020 rule, EPA narrowed the wastestreams for which it revised limitations to flue gas desulfurization (FGD) wastewater and bottom ash transport water. In addition, the Fifth Circuit in 2019 vacated the limitations for two wastestreams: combustion residual leachate and legacy wastewater. When viewing the figure, note that coal enters the power plant at the left, and the resultant gas proceeds to the right until it is released from the stack.

¹ The exception is gasification process discharges which occur at gasification plants.

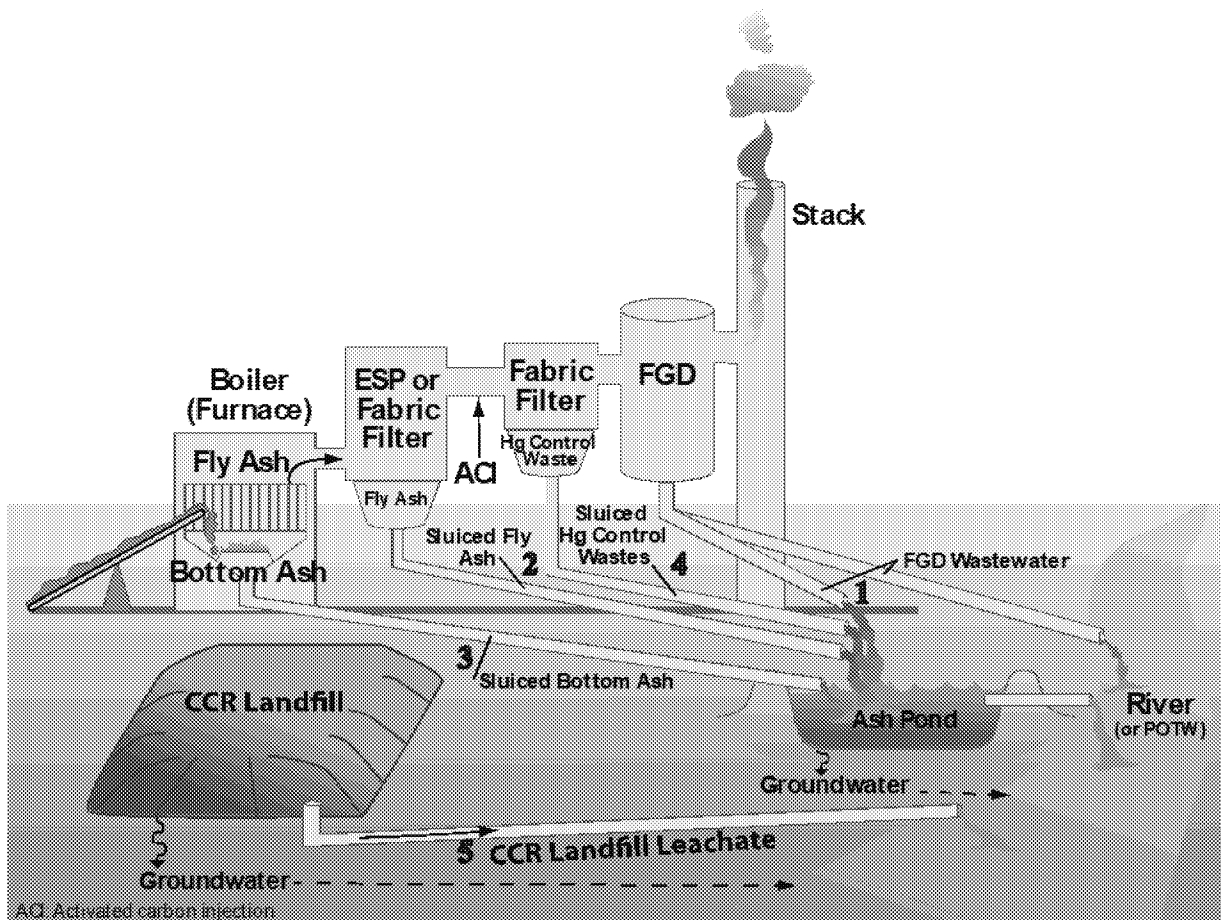


Briefing Memo – Steam Electric Reconsideration Rule; Litigation

Printed on MM/DD/YYYY

Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

Figure – Wastestreams at a Coal-Fired Power Plant Regulated in 2015



1. Flue Gas Desulphurization (FGD) wastewater – revised in 2020
2. Fly ash transport water (Sluiced Fly Ash)
3. Bottom ash transport water (Sluiced Bottom Ash) – revised in 2020
4. Mercury (Hg) control wastewater (Sluiced Hg control waste)
5. Combustion residual leachate from a coal combustion residual (CCR) landfill or surface impoundment (aka: ash pond) – vacated in 2019
6. Gasification process discharges [not pictured]
7. Legacy wastewaters (i.e., any of the above wastewaters generated before the implementation dates for the new, more stringent ELGs) – vacated in 2019

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 5/21/2021 9:08:30 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Garbow, Avi [Garbow.Avi@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]
CC: Nagle, Deborah [Nagle.Deborah@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Materials for mtg with steam electric petitioners Mon., 5/24, 10:30 am
Attachments: Draft Talking Points.docx; Consolidated Applachian Voices Notes (002).docx; Steam Follow-Up Analysis Memo 20210514.docx

Avi, Melissa, and Benita,

Mary Ellen and I have prepared some high-level talking points ahead of the meeting scheduled with environmental petitioners on Monday at 10:30, as we discussed with Avi this afternoon. It also contains some additional background for Avi and a list of invitees. I'm also attaching a summary of the last meeting between petitioners and OW staff, which sets forth many of their concerns and requests of the Agency. Finally, again for Avi's background, I'm including a briefing paper that OW staff prepared and discussed with Melissa and Benita this week.

Please let me (564-3376) or Mary Ellen (564-1345) know if you have any questions or would like anything else in advance of the call.

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 3/2/2021 2:13:13 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Messier, Dawn [Messier.Dawn@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Petitioners in steam electric litigation request meeting with EPA

Melissa,

I wanted to let you know that we received the following meeting request from Environmental Group Petitioners (including Sierra Club, so Dimple is recused) in our current litigation challenging the 2020 steam electric reconsideration rule, *Appalachian Voices v. EPA*, No. 20-2187 (4th Cir.). The rule is one that has been identified for review under E.O. 13990, and the case is in abeyance until May 25, 2021, to allow us time to undertake such review. The Office Director for the Office of Science and Technology has directed her staff to set up a meeting with these litigants to hear their perspective. We will ensure that OGC staff are included.

Please let me know if you have any questions.

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

From: Thomas Cmar <tcmar@earthjustice.org>
Sent: Wednesday, February 24, 2021 9:17 AM
To: igriffith@selcnc.org; Hoshijima, Tsuki (ENRD) <THoshijima@ENRD.USDOJ.GOV>
Subject: RE: Appalachian Voices (CA4) – meeting with EPA

Hi Tsuki,

Thanks again to you and EPA for following up re: our request for a meeting.

On behalf of both the D.C. Circuit and Fourth Circuit petitioners, we request a meeting as soon as possible to discuss EPA's review of the Steam Electric Reconsideration Rule pursuant to the January 20 Executive Order. We submitted extensive legal and technical comments on the proposed Reconsideration Rule in January 2020. Our comments identified multiple legal and technical deficiencies with the rule that EPA did not adequately consider or respond to when finalizing the Reconsideration Rule. We would like to discuss with EPA the immediate need for additional actions to address these deficiencies and minimize the harm from the unlawful Reconsideration Rule.

In addition, we are preparing additional information for EPA to consider as it reviews the rule and would like to share this new information with EPA. We are preparing to provide additional information concerning the availability and effectiveness of membrane-based treatment systems for FGD wastewater that EPA did not collect in the Reconsideration Rule record. We are also preparing information to support quantification of additional benefits of more protective ELG requirements that EPA did not quantify in the Benefit-Cost Analysis for the rulemaking. Both of these new sets of information provide further support for EPA to take actions to strengthen the rule and address its legal and technical deficiencies.

Attendees would include counsel for petitioners in both of the consolidated challenges to the Reconsideration Rule, as well as potentially client representatives as needed or helpful.

Please let us know if you have any questions or if it would be helpful to discuss this by phone.

Thanks,

Thom

From: Leslie Griffith <lgriffith@selcnc.org>
Sent: Friday, February 19, 2021 9:16 AM
To: tsuki.hoshijima@usdoj.gov; Thomas Cmar <tcmar@earthjustice.org>
Subject: RE: Appalachian Voices (CA4) – meeting with EPA

Hi Tsuki,
We'd be happy to. We'll put something together and get it to you soon.
Thanks,
Leslie

From: Hoshijima, Tsuki (ENRD) [<mailto:Tsuki.Hoshijima@usdoj.gov>]
Sent: Thursday, February 18, 2021 9:18 PM
To: Leslie Griffith; Thomas Cmar
Subject: Appalachian Voices (CA4) – meeting with EPA

Leslie and Thom,

On our call the other day, you asked whether EPA would be amenable to meeting with petitioners to discuss the substance of the Steam Electric Reconsideration Rule.

Would you be willing to put together a written meeting request describing a bit more what you would like to discuss, what you would want the meeting to look like, and who you think would attend for petitioners? That would help us determine who from EPA would attend and when EPA thinks it would make sense to have the meeting.

Thanks,
Tsuki

Tsuki Hoshijima
Trial Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Defense Section
202-514-3468
tsuki.hoshijima@usdoj.gov

Southwestern Electric Power Company v. United States..., 920 F.3d 999 (2019)

920 F.3d 999

United States Court of Appeals, Fifth Circuit.

SOUTHWESTERN ELECTRIC POWER
COMPANY; Utility Water Act Group;
Union Electric Company, doing business
as Ameren Missouri; Waterkeeper
Alliance, Incorporated; Environmental
Integrity Project; Sierra Club; American
Water Works Association; National
Association of Water Companies; City of
Springfield, Missouri, by and through the
Board of Public Utilities; Duke Energy
Indiana, Incorporated, Petitioners

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY; Andrew
Wheeler, in his official capacity as Acting
Administrator of the United States
Environmental Protection Agency,
Respondents

No. 15-60821

FILED April 12, 2019

Synopsis

Background: Environmental organizations filed petitions under Clean Water Act (CWA) challenging United States Environmental Protection Agency's (EPA) final rule updating effluent limitation guidelines for steam-electric power plants. Petitions were consolidated and transferred by Judicial Panel on Multidistrict Litigation.

Holdings: The Court of Appeals, Stuart Kyle Duncan, Circuit Judge, held that:

^[1] EPA acted arbitrarily and capriciously by setting best available technology economically achievable (BAT) limit for legacy wastewater equal to outdated best practicable control technology currently available (BPT) standard of surface impoundments;

^[2] organizations did not waive argument that EPA acted

arbitrarily and capriciously in promulgating effluent limitation;

^[3] CWA required EPA to reflect performance of single best-performing plant in field in setting BAT standard for combustion residual leachate;

^[4] EPA could not take into account relatively small amount of pollutants discharged in leachate or stricter BATs set for larger industry wastestreams as justification for defaulting to BPT standard of impoundments set 36 years earlier;

^[5] BAT limit for leachate rested on impermissible interpretation of CWA; and

^[6] EPA's decision not to update BAT limit for leachate was unreasonable.

Vacated in part and remanded.

West Headnotes (21)

- [1] **Administrative Law and Procedure**—Wisdom, judgment, or opinion in general
Administrative Law and Procedure—Scientific and technical matters

Under Administrative Procedure Act's highly deferential standard of review, court is not empowered to substitute its judgment for agency's, particularly where agency's decision turns on its evaluation of complex scientific data within its technical expertise. 5 U.S.C.A. § 706(2)(A).

4 Cases that cite this headnote

- [2] **Administrative Law and Procedure**—Review for arbitrary, capricious, unreasonable, or illegal actions in general

Southwestern Electric Power Company v. United States..., 920 F.3d 999 (2019)

If agency's reasons and policy choices conform to minimal standards of rationality, then its actions are reasonable and must be upheld by court. 5 U.S.C.A. § 706(2)(A).

1 Cases that cite this headnote

[3] **Environmental Law** Water pollution

Environmental Protection Agency's (EPA) choice of analytical methodology in setting and enforcing standards governing pollutant discharges from point sources under Clean Water Act (CWA) is entitled to presumption of regularity, leaving challengers with considerable burden to carry. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b).

[4] **Administrative Law and Procedure** Review for arbitrary, capricious, unreasonable, or illegal actions in general

Court must set aside agency action if agency entirely failed to consider important aspect of problem, offered explanation for its decision that runs counter to evidence before agency, or is so implausible that it could not be ascribed to difference in view or product of agency expertise. 5 U.S.C.A. § 706(2)(A).

3 Cases that cite this headnote

[5] **Administrative Law and Procedure** Review for arbitrary, capricious, unreasonable, or illegal actions in general

In reviewing agency action under Administrative Procedure Act (APA), court must ensure that agency examined relevant data and articulated satisfactory explanation for its action and assess whether agency's decision was

based on consideration of relevant factors. 5 U.S.C.A. § 706(2)(A).

4 Cases that cite this headnote

[6] **Administrative Law and Procedure** Plain, literal, or clear meaning; ambiguity or silence

If Congress has directly spoken on issue, court, as well as agency, must give effect to unambiguously expressed intent of Congress.

2 Cases that cite this headnote

[7] **Administrative Law and Procedure** Plain, literal, or clear meaning; ambiguity or silence
Administrative Law and Procedure Permissible or reasonable construction

If statutory text is ambiguous and agency's construction of statute is permissible, it should be upheld.

4 Cases that cite this headnote

[8] **Environmental Law** Particular limitations and guidelines

Environmental Protection Agency (EPA) acted arbitrarily and capriciously in promulgating effluent limitation guidelines for steam-electric power plants by setting best available technology economically achievable (BAT) limit for legacy wastewater equal to outdated best practicable control technology currently available (BPT) standard of surface impoundments, where EPA's final rule described impoundments as outdated and ineffective pollution control technology and indicated that other available and affordable technologies were far better than impoundments

Southwestern Electric Power Company v. United States..., 920 F.3d 999 (2019)

at removing pollutants from various streams that comprised legacy wastewater, rule said nothing to indicate that choice of impoundments as BAT for legacy wastewater was based on performance of single best-performing plant in field, and EPA failed to allow BAT determinations to be made by each facility's permitting authority on site-specific basis. Federal Water Pollution Control Act §§ 301, 304, 33 U.S.C.A. §§ 1311(b)(2), 1314(b)(2).

purposes of reviewing administrative agency's construction of statute that it administers, court must be guided to degree by common sense as to manner in which Congress is likely to delegate policy decision of such economic and political magnitude to administrative agency.

1 Cases that cite this headnote

[9] **Environmental Law**—Preservation of error in administrative proceeding

Environmental organizations did not waive argument that Environmental Protection Agency (EPA) acted arbitrarily and capriciously in promulgating effluent limitation guidelines for steam-electric power plants when it deferred setting nationwide effluent guideline for legacy wastewater by failing to raise it during notice-and-comment period for final rule. Federal Water Pollution Control Act § 101 et seq., 33 U.S.C.A. § 1251 et seq.

[12] **Environmental Law**—Technology-based limits

In setting best available technology economically achievable (BAT) standard for combustion residual leachate in final rule on effluent limitation guidelines for steam-electric power plants, Clean Water Act (CWA) required Environmental Protection Agency (EPA) to reflect performance of single best-performing plant in field, rather than average of best performance levels of existing plants. Federal Water Pollution Control Act §§ 301, 304, 33 U.S.C.A. §§ 1311(b)(1)(A), 1311(b)(2)(A), 1314(b)(1)(A), 1314(b)(1)(B), 1314(b)(2)(B).

[10] **Statutes**—Construing together; harmony

In construing statute, court must read words in their context, interpreting statute as symmetrical and coherent regulatory scheme, and fitting, if possible, all of statute's parts into harmonious whole.

1 Cases that cite this headnote

[13] **Environmental Law**—Particular limitations and guidelines

In setting best available technology economically achievable (BAT) standard for combustion residual leachate in final rule on effluent limitation guidelines for steam-electric power plants, Environmental Protection Agency (EPA) could not take into account relatively small amount of pollutants discharged in leachate or stricter BATs set for larger industry wastestreams as justification for defaulting to best practicable control technology currently available (BPT) standard of impoundments set 36 years earlier. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b)(2)(B).

[11] **Administrative Law and Procedure**—Plain, literal, or clear meaning; ambiguity or silence

In determining whether Congress has specifically addressed question at issue, for

Southwestern Electric Power Company v. United States..., 920 F.3d 999 (2019)

[14] **Environmental Law**↔Construction

Courts must interpret Clean Water Act (CWA) by looking at statute's full text, rather than one isolated clause, along with statute's structure and its public safety purpose. Federal Water Pollution Control Act § 101 et seq., 33 U.S.C.A. § 1251 et seq.

1 Cases that cite this headnote

[15] **Administrative Law and Procedure**↔Plain, literal, or clear meaning; ambiguity or silence
Administrative Law and Procedure↔Permissible or reasonable construction

In determining whether agency's interpretation of ambiguous statute is entitled to *Chevron* deference, court must ask only whether agency's answer is based on permissible construction of statute.

1 Cases that cite this headnote

[16] **Administrative Law and Procedure**↔Plain, literal, or clear meaning; ambiguity or silence
Administrative Law and Procedure↔Permissible or reasonable construction

Under *Chevron*, agency's interpretation of ambiguous statute governs if it is reasonable interpretation of statute—not necessarily only possible interpretation, nor even interpretation deemed most reasonable by courts.

[17] **Administrative Law and Procedure**↔Plain, literal, or clear meaning; ambiguity or silence

Administrative Law and Procedure↔Erroneous or unreasonable construction; conflict with statute

Agency interpretation of ambiguous statute is not entitled to *Chevron* deference if it is contrary to clear congressional intent or frustrates policy Congress sought to implement.

[18] **Environmental Law**↔Water pollution

Provision of Environmental Protection Agency's (EPA) final rule updating effluent limitation guidelines for steam-electric power plants setting best available technology economically achievable (BAT) limit for combustion residual leachate as surface impoundments rested on impermissible interpretation of Clean Water Act (CWA), and thus was not entitled to *Chevron* deference, where final rule categorically recognized that impoundments were ineffective at removing toxic pollutants from wastewater, rule unreasonably declined to set as BAT available technologies that were admittedly more effective at controlling leachate discharges, and EPA admitted during notice-and-comment that chemical precipitation was available and demonstrated technology for treatment of combustion residual leachate, based on its use in treating similar wastestream. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b)(2)(B).

[19] **Environmental Law**↔Substances, Sources, and Activities Regulated

Lack of data is not valid excuse for agency's failure to regulate activity pursuant to Clean Water Act (CWA) that concededly creates pollution. Federal Water Pollution Control Act § 101 et seq., 33 U.S.C.A. § 1251 et seq.

1 Cases that cite this headnote

Southwestern Electric Power Company v. United States..., 920 F.3d 999 (2019)

[20] Environmental Law Technology-based limits

Technological process can be deemed “available” for purposes of setting best available technology economically achievable (BAT) standard under Clean Water Act (CWA), even if it is not in use at all, or if it is used in unrelated industries. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b)(2)(B).

[21] Environmental Law Particular limitations and guidelines
Environmental Law Water pollution

Environmental Protection Agency’s (EPA) decision not to update best available technology economically achievable (BAT) limit for combustion residual leachate in promulgating final rule updating effluent limitation guidelines for steam-electric power plants on ground that leachate pollution constituted very small portion of pollutants discharged collectively by all steam power plants was unreasonable interpretation of Clean Water Act (CWA), and thus was not entitled to *Chevron* deference, where, if leachate were separate industry, it would rank as 18th-largest source of water pollution in United States. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b)(2)(B).

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Martin Francis McDermott, Tsuki Hoshijima, U.S. Department of Justice, Avi S. Garbow, Environmental Protection Agency, Jessica O’Donnell, U.S. Department of Justice, Environment & Natural Resources Division, Washington, DC, for Respondent.

Before HAYNES, HO, and DUNCAN, Circuit Judges.

Opinion

STUART KYLE DUNCAN, Circuit Judge:

***1002** On Petitions for Review of Final Administrative Actions of the United States Environmental Protection Agency

Attorneys and Law Firms

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***1003** Steam-electric power plants generate most of the electricity used in our nation and, sadly, an unhealthy share of the pollution discharged into our nation’s waters. To control this pollution, the Clean Water Act, 33 U.S.C. § 1251 *et seq.*, empowers the Environmental Protection

Agency to promulgate and enforce rules known as “effluent limitation guidelines” or “ELGs.” *Id.* §§ 1311, 1314, 1362(11). For quite some time, ELGs for steam-electric power plants have been, in EPA’s words, “out of date.” 80 Fed. Reg. 67,838. That is a charitable understatement. The last time these guidelines were updated was during the second year of President Reagan’s first term, the same year that saw the release of the first CD player, the Sony Watchman pocket television, and the Commodore 64 home computer. In other words, 1982. *See id.* (noting ELGs were “promulgated and revised in 1974, 1977, and 1982”). The guidelines from that bygone era were based on “surface impoundments,” which are essentially pits where wastewater sits, solids (sometimes) settle out, and toxins leach into groundwater. *Id.* at 67,840, 67,851. Impoundments, EPA tells us, have been “largely ineffective at controlling discharges of toxic pollutants and nutrients.” *Id.* at 67,840. Consequently, in 2005 the agency began a multi-year study to bring the steam-electric ELGs into the 21st century. *Id.* at 67,841.

In November 2015, EPA unveiled the final rule: the “Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category,” 80 Fed. Reg. 67,838 (Nov. 3, 2015). The rule updates guidelines for six of the wastestreams that issue from plants and foul our waters. Importantly, the Clean Water Act requires setting new ELGs based on the “Best Available Technology Economically Available” or “BAT.” 33 U.S.C. § 1314(b)(2)(B). BAT is the gold standard for controlling water pollution from existing sources. By requiring BAT, the Act forces implementation of increasingly stringent pollution control methods. *See NRDC v. EPA*, 822 F.2d 104, 123 (D.C. Cir. 1987) (describing the Act as “technology-forcing”).

We consider a challenge to the final rule brought by various environmental petitioners. *1004 They target two discrete parts of the rule: the new ELGs for “legacy wastewater” (wastewater from five of the six streams generated before a specific date) and for “combustion residual leachate” (liquid that percolates through landfills and impoundments). These two categories account for massive amounts of water pollution. For instance, leachate alone would qualify as the 18th-largest source of water pollution in the nation, producing more toxic-weighted pound equivalents than the entire coal mining industry. The environmental petitioners’ basic complaint is that EPA set an unlawful BAT for these two categories. Whereas the BAT for the other streams adopts modern technologies, they claim the agency arbitrarily set BAT for legacy wastewater and leachate using the same archaic technology in place since 1982—namely,

impoundments. It was as if Apple unveiled the new iMac, and it was a Commodore 64.

The environmental petitioners challenge those portions of the rule under the Administrative Procedure Act and the well-worn *Chevron* test governing review of agency action. *See Chevron, USA, Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). For the reasons discussed below, we agree that the portions of the rule regulating legacy wastewater and combustion residual leachate are unlawful. Accordingly, we VACATE those portions of the rule and REMAND to the agency for reconsideration.

I. Background

A. The Clean Water Act

The Clean Water Act (“CWA” or “Act”), 86 Stat. 833, as amended, 33 U.S.C. § 1251 *et seq.*, was enacted over President Nixon’s veto in 1972. *See Train v. City of New York*, 420 U.S. 35, 40, 95 S.Ct. 839, 43 L.Ed.2d 1 (1975). Few laws have shouldered a weightier burden—namely, “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a); *see also, e.g., City of Milwaukee v. States of Illinois and Michigan*, 451 U.S. 304, 318, 101 S.Ct. 1784, 68 L.Ed.2d 114 (1981) (“Congress’ intent in enacting [the CWA] was clearly to establish an all-encompassing program of water pollution regulation.”); *Am. Petroleum Inst. v. EPA*, 661 F.2d 340, 343-44 (5th Cir. Unit A Nov. 13, 1981) (“*API I*”) (noting CWA’s “ambitious purpose”). To that end, the Act makes “unlawful” the “discharge of any pollutant by any person” into the nation’s “navigable waters,” unless otherwise permitted. 33 U.S.C. §§ 1311(a), 1362(7), (12).¹

We have previously detailed the Act’s “distinct, though interlocking, regulatory schemes.” *Chem. Mfrs. Ass’n v. EPA*, 870 F.2d 177, 195 (5th Cir. 1989) (“*CMA*”), *clarified on reh’g*, 885 F.2d 253.² Here we *1005 focus on one of the Act’s key regulatory tools: “effluent limitation guidelines” (“ELGs” or “guidelines”), which are nationwide standards set by the EPA Administrator to govern pollutant discharges from point sources. *See* 33 U.S.C. § 1314(b) (authorizing Administrator to set “effluent limitation guidelines” for “classes and categories of point sources”); *Tex. Oil & Gas*, 161 F.3d at 927

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(“ELGs are the rulemaking device prescribed by the CWA to set national effluent limitations for categories and subcategories of point sources”).³

The Act requires ELGs to be based on technological feasibility rather than on water quality. *Id.* at 927 (citing *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 130-31, 97 S.Ct. 965, 51 L.Ed.2d 204 (1977); *API I*, 661 F.2d at 343-44). That is, the Administrator must “require industry, regardless of a discharge’s effect on water quality, to employ defined levels of technology to meet effluent limitations.” *API I*, 661 F.2d at 344; *see also Tex. Oil & Gas*, 161 F.3d at 927 (ELGs are “technology-based rather than harm-based” insofar as they “reflect the capabilities of available pollution control technologies to prevent or limit different discharges rather than the impact that those discharges have on the waters”). The Act therefore mandates a system in which, as available pollution-control technology advances, pollution-discharge limits will tighten. *See, e.g., Nat’l Crushed Stone*, 449 U.S. at 69, 101 S.Ct. 295 (the Act “provides for increasingly stringent effluent limitations”) (citing 33 U.S.C. § 1311(b)); *CMA*, 870 F.2d at 196 (the Act requires compliance with “technology-based pollutant-effluent limitations that, in time, will become more stringent”) (citing 33 U.S.C. §§ 1311(b), 1314(b)). The D.C. Circuit accurately described this aspect of the Act’s scheme as “technology-forcing,” meaning it seeks to “press development of new, more efficient and effective [pollution-control] technologies.” *NRDC v. EPA*, 822 F.2d 104, 123 (D.C. Cir. 1987) (“*NRDC I*”); *see also, e.g., NRDC v. EPA*, 808 F.3d 556, 563-64 (2nd Cir. 2015) (“*NRDC II*”) (describing ELG scheme as “technology-forcing, meaning it should force agencies and permit applicants to adopt technologies that achieve the greatest reductions in pollution”) (citing *NRDC I*).⁴

The Act prescribes various technological standards to be used in setting effluent limitations. Two are relevant here: “best practicable control technology currently available” (“BPT”) and “best available technology economically achievable” (“BAT”). Compare *1006 33 U.S.C. §§ 1311(b)(1)(A); 1314(b)(1)(B) (BPT), with *id.* §§ 1311(b)(2)(A); 1314(b)(2)(B) (BAT). The less stringent of these two standards is BPT, which the Supreme Court has described as only “a first step toward [the Act’s] goal.” *Nat’l Crushed Stone*, 449 U.S. at 75 n.14, 101 S.Ct. 295; *see also, e.g., BP Explor. & Oil, Inc. v. EPA*, 66 F.3d 784, 789 (6th Cir. 1995) (describing BPT as “the first stage of pollutant reduction”). BPT applied to limitations on direct discharges of pollutants during an interim period (originally slated to end in 1984 but later extended to 1989). 33 U.S.C. § 1311(b)(1)(A); *Tex. Oil & Gas*, 161

F.3d at 927-28; *CMA*, 870 F.2d at 196. Instead of defining BPT, the Act lists various factors the Administrator must consider in determining it—including an explicit cost/benefit analysis: “the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application.” 33 U.S.C. § 1314(b)(1)(B).⁵ We have explained that “BPT limitations are intended to represent the average of the best levels of performance by existing plants of various sizes, ages, and unit processes within the category or subcategory for control of conventional pollutants.” *CMA*, 870 F.2d at 203 (citing 52 Fed. Reg. 42,525); *see also, e.g., Nat’l Crushed Stone*, 449 U.S. at 75-76, 101 S.Ct. 295 (discussing BPT).

The stricter of the two standards is BAT, which has applied to existing, direct discharges of toxic and non-conventional pollutants since March 31, 1989. *See* 33 U.S.C. §§ 1311(b)(2)(A); 1314(b)(2)(A); *Tex. Oil & Gas*, 161 F.3d at 927-28; *see also BP Explor.*, 66 F.3d at 790 (describing BAT as “the second stage” of pollutant reduction). When pollutants are regulated under this standard, the EPA “must set discharge limits that reflect the amount of pollutant that would be discharged by a point source employing the best available technology that the EPA determines to be economically feasible across the category or subcategory as a whole.” *Tex. Oil & Gas*, 161 F.3d at 928. We have held that BAT limitations must “be based on the performance of the single best-performing plant in an industrial field.” *CMA*, 870 F.2d at 226. In describing the relationship between BAT and BPT, the Supreme Court has explained that a BAT must achieve “reasonable further progress” towards the Act’s goal of eliminating pollution, and BPT serves as the “prior standard” for measuring that progress. *See Nat’l Crushed Stone*, 449 U.S. at 75, 101 S.Ct. 295 (explaining that “BPT serves as the prior standard with respect to BAT[’s]” reasonable further progress requirement). As with BPT, the Act lists factors the Administrator must consider in determining BAT. 33 U.S.C. § 1314(b)(2)(B).⁶ The Administrator has “considerable discretion” in weighing those *1007 factors. *Tex. Oil & Gas*, 161 F.3d at 928 (citation omitted). Unlike BPT, however, the BAT factors omit a cost/benefit analysis and replace it with a requirement to consider only “the cost of achieving such effluent reduction.” *Id.*; *see also, e.g., Nat’l Crushed Stone*, 449 U.S. at 71, 101 S.Ct. 295 (BPT and BAT factors are “similar ... except that in assessing BAT total cost is no longer to be considered in comparison to effluent reduction benefits”). Indeed, the Supreme Court has explained that, unlike BAT, “BPT limitations do not require an industrial category to commit the maximum economic resources to pollution control, even if affordable.” *Nat’l Crushed Stone*, 449 U.S. at 75, 101

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S.Ct. 295.⁷

B. The Final Rule

The rule at issue in this case regulates effluent discharges from steam-electric power plants. Those plants burn nuclear or fossil fuels to heat water in boilers, generating steam that drives turbines connected to electric generators. 80 Fed. Reg. 67,839 n.1. This process produces something nearly everyone regards as good: electricity. Indeed, the plants regulated by the rule provide most of the electricity annually produced in the United States. But the process also produces something everyone regards as bad: pollution. According to EPA, discharges from these plants account for “about 30 percent of all toxic pollutants discharged into surface waters by all industrial categories regulated under the CWA.” *Id.* at 67,839-40; *see also, e.g., Michigan v. EPA*, — U.S. —, 135 S.Ct. 2699, 2705, 192 L.Ed.2d 674 (2015) (addressing regulation of air pollution from power plants under the Clean Air Act); *ConocoPhillips Co. v. EPA*, 612 F.3d 822, 826 (5th Cir. 2010) (addressing regulation of cooling water systems at power plants). For instance, power plant discharges contain toxic metals such as mercury, arsenic, lead, and selenium, which bioaccumulate in fish, accumulate in lake and reservoir sediment, and pollute drinking water supplies. People who eat the tainted fish or drink the tainted water can suffer negative health consequences such as cancer, cardiovascular disease, neurological disorders, kidney and liver damage, and lowered IQs (in children). *Id.* at 67,840.

EPA first promulgated and then revised ELGs for steam-electric power plants in 1974, 1977, and 1982. *See id.*; *see also* 39 Fed. Reg. 36,186 (Oct. 8, 1974); 42 Fed. Reg. 15,690 (Mar. 23, 1977); 47 Fed. Reg. 52,290 (Nov. 19, 1982). Those guidelines are now, in the agency’s words, “out of date,” because “[t]hey do not adequately control the pollutants (toxic metals and other[s]) discharged by this industry, nor do they reflect relevant process and technology advances that have occurred in the last 30-plus years.” 80 Fed. Reg. 67,840. The old rules and the processes they regulated are relics of the past:

The processes employed and pollutants discharged by the industry look very different today than they did in 1982. Many plants, nonetheless, still treat their wastewater using only surface impoundments, which are largely ineffective at controlling discharges of toxic pollutants and nutrients.

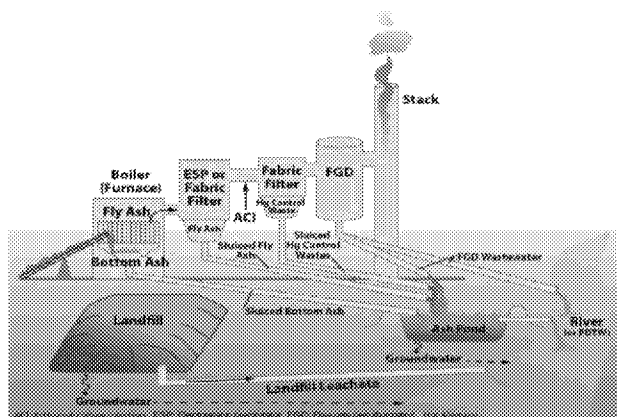
***1008** *Id.* (“Surface impoundments” are ponds designed to allow particulates to settle out of wastewater by force of gravity. *See infra.*) Happily, though, EPA reports that, “[i]n the several decades since the steam electric ELGs were last revised,” technologies that are more effective, “affordable,” and “widely available” have “increasingly been used at plants.” *Id.* Thus, EPA began a new rulemaking to update power plant ELGs. The agency conducted a detailed industry study⁸ from 2006-2009 and on June 7, 2013 issued a proposed rule, 78 Fed. Reg. 34,432, 34,439, that generated over 200,000 comments. 80 Fed. Reg. 67,844. On November 3, 2015 the agency issued a final rule entitled “Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category” (“final rule” or “rule”). 80 Fed. Reg. 67,838.

The rule addresses these six streams produced by power plants:

1. Flue gas desulfurization (FGD) wastewater
2. Fly ash transport wastewater
3. Bottom ash transport wastewater
4. Flue gas mercury control (FGMC) wastewater (“Hg control waste”)
5. Combustion residual leachate (or “Leachate”)
6. Gasification wastewater (not depicted in figure below).

80 Fed. Reg. 67,846-47.⁹ The rule treats another category (“legacy” wastewater), which is a subset of five other streams. *Infra* I.B.1.¹⁰ This diagram illustrates how such streams are produced:

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When EPA originally regulated steam-electric effluents in the 1970s and 1980s, it did so under the less-stringent BPT standard, *see supra* I.A., and set BPT for bottom ash transport water and leachate as surface impoundments. *See* 80 Fed. Reg. 67,848-49. Surface impoundments, or “ash ponds,” are essentially watery pits that “rely on gravity to remove particulates from wastewater” and were “the technology basis for the previously promulgated BPT effluent limitations for low volume waste sources.” *Id.* at 67,840, 67,851. As the new rule describes, however, the ensuing three decades have rendered that BPT standard “out of date,” because it “do[es] not adequately control the pollutants (toxic metals and other[s]) discharged by this industry, nor do[es] [it] reflect relevant process and technology advances that have occurred in the last 30-plus years.” *Id.* at 67,840. Moreover, the Act required that the new guidelines for existing direct¹¹ discharges conform to the stricter BAT standard. *See* 33 U.S.C. § 1311(b)(2)(A), 80 Fed. Reg. 67,848-49; *see supra* I.A.

EPA thus considered more advanced control methods, which it notes are “affordable technologies that are widely available and already in place at some plants.” 80 Fed. Reg. 67,840. The agency describes those methods as follows:

- **Chemical precipitation** means treating wastewater by introducing chemicals that will react with substances currently dissolved or suspended in the water to produce a solid, non-soluble *precipitate*, which then can be filtered out or left to settle to the bottom of the wastewater. *EPA Wastewater Technology Fact Sheet*, EPA 832-F-00-018 (Sept. 2000).
- **Biological treatment** means introducing bacteria or other microorganisms to remove pollutants, specifically *1010 “heavy metals, selenium, and nitrates.” 80 Fed. Reg. 67,850.

• **Dry handling**, for fly ash, means “a dry vacuum system that employs a mechanical exhaustor to pneumatically convey the fly ash (via a change in air pressure) from hoppers directly to a silo,” without getting the ash wet. *Id.* at 67,852. For bottom ash, dry handling refers to “a system in which bottom ash is collected in a water quench bath and a drag chain conveyor (mechanical drag system) then pulls the bottom ash out of the water bath on an incline to dewater the bottom ash.” *Id.*

• **Evaporation**, for FGD wastewater and gasification wastewater, means using “a falling-film evaporator (also known as a brine concentrator) to produce a concentrated wastewater stream (brine) and a distillate stream.” *Id.* at 67,838, 67,853.

From those options EPA selected the following technologies as BAT for the various wastestreams:

Wastestreams	Technology basis for the main BAT/NSPS/PSES/PSNS regulatory options
FGD Wastewater.....	Chemical Precipitation + Biological Treatment
Fly Ash Transport Water.....	Dry handling
Bottom Ash Transport Water.....	Dry handling / Closed loop
FGMC Wastewater.....	Dry handling
Gasification Wastewater.....	Evaporation
Leachate.....	Impoundment (Equal to BPT)

80 Fed. Reg. 67848-49 (adapted from Table VIII-1—Final Rule: Steam Electric Main Regulatory Options). As shown, the rule set more advanced technologies as BAT for five of the six wastestreams. *See also id.* at 67,850, 67,852, 67,853 (explaining selection for each stream). For leachate and “legacy” wastewater, however, the rule selected “impoundment” as BAT, the same technology set as BPT in 1982. *Id.* at 67,854. Our focus is on the rule’s treatment of those streams, and so we provide additional detail below.

1. Legacy Wastewater

Legacy wastewater is not a distinct type of wastestream. Instead, as the final rule explains, the term describes wastewater from five of the streams (FGD, fly ash, bottom ash, FGMC, and gasification wastewater) that is “generated prior to” a future date. 80 Fed. Reg. at 67,854. That date, which is determined by the permitting authority, is required to be “as soon as possible beginning November 1, 2020 but no later than December 31, 2023.” 82 Fed. Reg. 43,496. Wastewater from streams generated before that date is denominated “legacy” wastewater and

is not subject to the stricter BAT applicable to those streams. *Id.* Instead, the BAT for legacy wastewater is “equal to the previously promulgated BPT regulations” in effect since 1982—namely, impoundments. *Id.* This means that legacy wastewater is allowed by the final rule to contain the same quantity of toxic pollutants allowed since 1982. *See id.* (setting BAT for legacy wastewater “equal to the previously promulgated BPT limitations on [total suspended solids] in the discharge of fly ash transport water, bottom ash transport water, and low volume waste sources”); *see also EPA Study Report*, EPA 821-R-09-008, at 5-20 (table listing pollutant concentrations at several individual impoundments studied during the rulemaking process). The “legacy” category will thus encompass a massive *1011 amount of wastewater from the five composite streams. For instance, according to the EPA’s Study Report, in 2008 alone the average plant produced over 2.7 billion gallons of fly ash transport water per year, as well as over 1.1 billion gallons of bottom ash transport water. *Id.* at 5-6, 5-7.

The rule imposes much more stringent limits on wastewater from these same streams generated *after* the date to be set by the permitting authority (again, between November 1, 2020 and December 31, 2023). For instance, EPA found that a combination of chemical precipitation and biological treatment was the BAT for treating pollution from non-legacy FGD wastewater, and that “dry handling” (a technique for disposing of fly ash and bottom ash without adding water) was the BAT for non-legacy ash wastestreams. *Id.* at 67,850-53. These technologies are significantly newer than surface impoundments, and EPA concluded they were the superior option for treating pollution in non-legacy wastewater. *Id.*

The rule accounts for the discrepancy between legacy and non-legacy wastewater regulations in various ways. For instance, it explains that legacy wastewater “already exists in wet form” and would thus not be amenable to dry handling, and also that EPA lacked data on whether legacy wastewater could be “reliably incorporated” into a closed-loop process “given the variation in operating practices among surface impoundments containing legacy wastewater.” *Id.* at 67,854-55. The rule also asserts that EPA lacked sufficient data to determine whether chemical or biological treatment would be effective on legacy wastewater. Legacy wastewater, the agency explained, is often “commingled”—meaning different streams are mixed together in an impoundment—making testing and data collection difficult. *Id.* at 67,855. For instance, commingling may result in varying the concentration and “flow rate” of pollutants in an impoundment. *Id.* The rule

acknowledges that multiple plants are in fact using chemical precipitation to treat commingled wastewater, but it nonetheless asserts that EPA lacks the requisite data from those plants. *Id.* at 67,855 n.29. Finally, the rule also acknowledges that a few plants discharge from impoundments containing non-commingled FGD legacy wastewater, but it nonetheless declines to establish a stricter BAT for that stream as well. *Id.* at 67,855. The rule explains that, in the agency’s view, imposing the stricter technologies even on non-commingled legacy wastewater would create bad “incentives”—for instance, encouraging plants to begin commingling FGD with other wastewaters or to release FGD wastewater from impoundments on an “accelerated schedule” prior to the compliance date. *Id.*

2. Leachate

The final rule describes leachate as follows:

Leachate includes liquid, including any suspended or dissolved constituents in the liquid, that has percolated through or drained from waste or other materials placed in a landfill, or that passes through the containment structure (*e.g.*, bottom, dikes, berms) of a surface impoundment.

80 Fed. Reg. 67,847. Where leachate occurs in a lined landfill or impoundment, it is typically collected and transported to an impoundment, where it is either “discharge[d] ... directly to receiving waters” or recycled to another impoundment prior to discharge. *Id.* Unlined landfills or impoundments simply “allow the leachate to potentially migrate to nearby ground waters, drinking water wells, or surface waters.” *Id.* The rule explains that “surface impoundments are the most widely used systems to treat ... leachate.” *Id.* Elsewhere, the rule acknowledges that *1012 “[g]round water contamination from surface impoundments” containing power plant wastewater “threatens drinking water, as evidenced by more than 30 documented cases.” *Id.* at 67,840; *see also EPA Study Report*, EPA 821-R-09-008, at 3-24 (landfill leachate diagram). The EPA study detailed the size of leachate pollution: Given plants using current technologies (mostly surface impoundments), leachate pollution amounts to 70,300 toxic-weighted pound equivalents per year. *See Technical Development Document (“TDD”),* EPA-821-R-15-007, at 10-39. Leachate thus accounts for more equivalent pollution than the entire coal mining industry. *Id.*; *Annual Effluent Guidelines Review Report*, EPA-821-R-16-002, at 2-26 (listing pollution from other

industries).

The final rule sets BAT for leachate equal to the previous BPT standard established in 1982. *Id.* at 67,854. The agency offers two primary justifications for its decision not to regulate leachate with any of the more advanced control technologies now available. First, the rule explains that EPA called for comments on leachate regulation during notice-and-comment rulemaking, but that “[c]ommenters did not provide information that the EPA could use to establish BAT limitations” for leachate. *Id.* at 67,854. Second, the rule asserts that leachate forms “a very small portion of the pollutants discharged collectively by all steam power plants.” *Id.* The agency reasons that, because the new BAT limits established for wastewater from other streams will substantially curtail total power plant pollution, the new rule “represents reasonable further progress toward the CWA’s goals” even without establishing any stricter controls on leachate. *Id.*

II. Procedural History

Four separate lawsuits challenging the final rule were originally brought in the Second, Fifth, Eighth, and Ninth Circuits.¹² Different groups of petitioners challenged different parts of the rule. Various power companies (“Industry Petitioners”) challenged the regulation of non-legacy FGD and gasification wastewater.¹³ Two water company associations (“Water Company Petitioners”), challenged the non-legacy FGD wastewater regulation.¹⁴ Finally, various environmental groups (“Environmental Petitioners” or “petitioners”) challenged the regulation of legacy wastewater and leachate.¹⁵ The four cases were consolidated by the United States Judicial Panel on Multidistrict Litigation and randomly assigned to our court.¹⁶ The Utility Water Act Group (“UWAG”) has since intervened to defend those portions of the rule challenged by the Environmental Petitioners.

***1013** In August 2017, we granted EPA’s motion to sever and hold in abeyance the Industry Petitioners’ and Water Company Petitioners’ challenges to the final rule. In September 2017, EPA announced it would reconsider the rule’s regulations concerning non-legacy FGD and bottom ash transport water. *See* 82 Fed. Reg. 43,494.¹⁷ As a result of these procedural developments, the challenges to the final rule raised by the Industry Petitioners and the Water Company Petitioners are not before us. We address only the challenges brought by the Environmental Petitioners.

III. Standard of Review

^[1] ^[2] ^[3] The Environmental Petitioners challenge the legacy wastewater regulation under the Administrative Procedure Act (“APA”). As relevant here, a court “shall ... hold unlawful and set aside” agency action under the APA if it finds such action was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). Under this “highly deferential” standard, *Avoyelles Sportsmen’s League, Inc. v. Marsh*, 715 F.2d 897, 904 (5th Cir. 1983), we are “not empowered to substitute [our] judgment for that of the agency.” *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416, 91 S.Ct. 814, 28 L.Ed.2d 136 (1971). This is particularly so where the agency’s decision turns on “its evaluation of complex scientific data within its technical expertise.” *BCCA Appeal Grp. v. EPA*, 355 F.3d 817, 824 (5th Cir. 2003) (citing *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103, 103 S.Ct. 2246, 76 L.Ed.2d 437 (1983)). Indeed, “[i]f the agency’s reasons and policy choices conform to minimal standards of rationality, then its actions are reasonable and must be upheld.” *Tex. Oil & Gas Ass’n*, 161 F.3d at 934. Furthermore, the “EPA’s choice of analytical methodology [in setting and enforcing standards] is entitled to a presumption of regularity,” leaving challengers with a “considerable burden” to carry. *Am. Petroleum Inst. v. EPA*, 787 F.2d 965, 983 (5th Cir. 1986).

^[4] ^[5] Our review under the APA is not toothless, however. We must set aside agency action if the agency “entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983) (“*State Farm*”); *see generally, e.g., Atchafalaya Basinkeeper v. U.S. Army Corps of Eng’rs*, 894 F.3d 692, 697 (5th Cir. 2018) (reciting *State Farm* standard). “[W]e must also ensure that the agency ‘examine[d] the relevant data and articulate[d] a satisfactory explanation for its action,’ ” and assess “ ‘whether the [agency’s] decision was based on a consideration of the relevant factors[.]’ ” *10 Ring Precision, Inc. v. Jones*, 722 F.3d 711, 723 (5th Cir. 2013) (quoting ***1014** *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856); *see also, e.g., Michigan v. EPA*, — U.S. —, —

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135 S.Ct. 2699, 2706, 192 L.Ed.2d 674 (2015) (explaining that “agency action is lawful only if it rests ‘on a consideration of the relevant factors’”) (quoting *State Farm, supra*); *U.S. Chamber of Commerce v. U.S. Dep’t of Labor*, 885 F.3d 360, 382 (5th Cir. 2018) (“Illogic and internal inconsistency are characteristic of arbitrary and unreasonable agency action.”); *Illinois Pub. Telecom. Ass’n v. FCC*, 117 F.3d 555, 566 (D.C. Cir. 1997), *decision clarified on reh’g*, 123 F.3d 693 (unexplained and “seemingly illogical” decisions are arbitrary and capricious). Furthermore, we “may uphold agency action only on the grounds that the agency invoked when it took the action.” *Michigan v. EPA*, 135 S.Ct. at 2712 (citing *SEC v. Chenery Corp.*, 318 U.S. 80, 87, 63 S.Ct. 454, 87 L.Ed. 626 (1943)).

¹⁶¹ ¹⁷¹The Environmental Petitioners challenge the leachate regulation under the two-step framework articulated in *Chevron, USA, Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984), governing judicial review of agency interpretations of statutes. *See generally, e.g., BCCA Appeal Grp.*, 355 F.3d at 824 (discussing *Chevron* in context of challenge to Clean Air Act regulations). At step one, the court considers “whether Congress has directly spoken to the precise question at issue.” *Chevron*, 467 U.S. at 842, 104 S.Ct. 2778. If Congress has directly spoken on an issue, that settles the matter: “[T]he Court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” *Id.* at 842-43, 104 S.Ct. 2778. Only if the statutory text is ambiguous can the court proceed to step two, asking whether the agency’s construction of the statute is “permissible.” *Id.* at 843, 104 S.Ct. 2778. If the construction is permissible, it should be upheld. “[A] court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency.” *Id.* “*Chevron* review and arbitrary and capricious review overlap at the margins,” specifically at *Chevron* step two. *Indep. Petroleum Ass’n of Am. v. Babbitt*, 92 F.3d 1248, 1258 (D.C. Cir. 1996); *see also Nutraceutical Corp. v. Von Eschenbach*, 459 F.3d 1033, 1038 (10th Cir. 2006).

IV. Analysis

A. Challenge to Legacy Wastewater Regulation

We first consider petitioners’ challenge¹⁸ to the final rule’s regulation of *1015 legacy wastewater. As already explained, legacy wastewater is not a separate wastewater stream but instead a subset of five of the other streams. *Supra* I.B.1. Specifically, legacy wastewater is defined by *when* wastewater is generated: Wastewater “generated prior to” the compliance date set for the new rule by a permitting authority is denominated “legacy” wastewater. *See* 80 Fed. Reg. 67,854. Instead of subjecting legacy wastewater to the more advanced and effective technologies that kick in after the rule’s compliance date (*i.e.*, chemical precipitation, biological treatment, dry handling, or evaporation), the rule sets BAT for legacy wastewater as equal to the BPT previously set in 1982 (*i.e.*, surface impoundments). *See id.* at 67,854-55.

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¹⁸¹Petitioners challenge that decision as arbitrary and capricious under the APA on two grounds. First, they claim the Act does not grant the Administrator authority to base BAT limits on *when* waste is generated, but instead requires setting BAT limits for “categories and classes of point sources” regardless of when waste is generated. *See, e.g., State Farm*, 463 U.S. at 43, 103 S.Ct. 2856 (explaining that, “[n]ormally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider”). Second, they claim that the rulemaking record refutes the conclusion that surface impoundments are BAT for legacy wastewater because, among other things, the final rule itself demonstrates that impoundments are ineffective at removing toxic pollutants. *See, e.g., id.* (an agency rule would also be arbitrary and capricious if it “offered an explanation for its decision that runs counter to the evidence before the agency”). We need not reach petitioners’ first argument, because we conclude for multiple reasons that EPA acted arbitrarily and capriciously by setting a BAT limit for legacy wastewater equal to the outdated BPT standard of surface impoundments.

First, the final rule repeatedly recognizes that impoundments are “largely ineffective” at removing toxins from wastewater. 80 Fed. Reg. 67,840. Impoundments “rely on gravity to remove particulates from wastewater,” but the rule explains that “gravity in surface impoundments” fails to “effectively or reliably” remove “[p]ollutants ... present mostly in soluble (dissolved) form, such as selenium, boron, and

magnesium,” and also fails to “effectively” remove the dissolved portion of “metals present in both soluble and particulate forms (such as mercury).” *Id.* at 67,851. When ingested by humans either through drinking water or through seafood, these metals can lead to serious harms including “cancer, cardiovascular disease, neurological disorders, kidney and liver damage, and lowered IQs in children.” *Id.* at 67,840. Additionally, the rule informs us that various factors can alter chemical conditions in impoundments and thus compromise their effectiveness: For instance, low pH in the impoundment environment can convert particulate metals to soluble form, reducing the “settling efficiency in the impoundments” and “leading to increased levels of dissolved metals and high concentrations of metals in discharges from surface impoundments.” *Id.* at 67,851. Even the changing seasons—in an effect called “seasonal turnover”—impair impoundments by cooling the upper layer of water and causing it to sink, resulting in “resuspension of solids ... and a consequent *1016 increase in the concentrations of pollutants discharged from the impoundment.” *Id.*

These conceded defects in impoundments are in critical tension with EPA’s choosing them as BAT for legacy wastewater. After all, BAT is supposed to be “the CWA’s most stringent standard” for setting discharge limits for existing sources. *Tex. Oil & Gas*, 161 F.3d at 928; *see also* 33 U.S.C. §§ 1311(b)(2), 1314(b)(2). We are rightfully skeptical when EPA specifies impoundments as BAT while, in the same breath, detailing how bad those impoundments are in stemming the discharge of toxic pollution. *See, e.g., CMA*, 885 F.2d at 265 (remanding because EPA “failed ... [to] demonstrate a reasonable basis for its conclusion” that its chosen BAT was as effective as a proposed alternative).

Second, as the rule also recounts, the flaws of impoundments are precisely why EPA refused to set them as BAT for five of the six wastewater streams at issue here. *See* 80 Fed. Reg. 67,851-53. For instance, the rule states that “EPA did not select surface impoundments as the BAT technology for FGD wastewater because it *would not result in reasonable further progress toward eliminating the discharge of all pollutants, particularly toxic pollutants.*” *Id.* at 67,851 (emphasis added); *see also id.* (explaining that EPA declined to set impoundments as BAT “[b]ecause many of the pollutants of concern in FGD wastewater are present in dissolved form and *would not be removed by surface impoundments*”) (emphasis added). EPA likewise declined to set impoundments as BAT for fly ash transport water, bottom ash transport water, FGMC wastewater, and gasification water, and in each case explained that it did so “for the same reasons ...

that EPA did not identify surface impoundments as BAT for FGD wastewater.” *Id.* at 67,852 (fly ash), 67,853 (bottom ash, FGMC, and gasification wastewater).

In other words, for five of the six wastewater streams regulated by the final rule (the one exception is leachate, discussed in V.B. *infra*), EPA affirmatively *rejected* surface impoundments as BAT “because [they] would not result in reasonable further progress toward eliminating the discharge of all pollutants, particularly toxic pollutants.” *Id.* at 67,851.¹⁹ And yet, having rejected impoundments as BAT because they would not achieve “reasonable further progress” toward eliminating pollution from those streams, EPA turned around and *chose* impoundments as BAT for each of those same streams generated before the compliance date. That paradoxical action signals arbitrary and capricious agency action. *See, e.g., Chamber of Commerce*, 885 F.3d at 382 (“Illogic and internal inconsistency are characteristic of arbitrary and unreasonable agency action.”); *see also, e.g., GameFly, Inc. v. Postal Regulatory Comm’n*, 704 F.3d 145, 148 (D.C. Cir. 2013) (explaining that agency action “‘illogical on its face’ ” may be arbitrary and capricious) (quoting *Am. Fed’n of Gov’t Emps., Local 2924 v. Fed. Labor Relations Auth.*, 470 F.3d 375, 380 (D.C. Cir. 2006)). It also strongly suggests that EPA has contravened the plain language of the CWA, which defines BAT as the technology that “*will result in reasonable further progress*” toward pollutant discharge elimination. 33 U.S.C. § 1311(b)(2)(A) (emphasis added); *see also, e.g., Nat’l Crushed Stone*, 449 U.S. at 74-75, 101 S.Ct. 295 *1017 (discussing “reasonable further progress” component of BAT).

Third, the final rule explains that the shortcomings of surface impoundments were a key factor in motivating EPA to conduct the 2006-2009 study and revise water pollution regulations for power plants in the first place. The rule describes the previous ELGs from 1974, 1977, and 1982 as “out of date,” because they failed to “adequately control the pollutants ... discharged by this industry” and failed to “reflect relevant process and technology advances that have occurred in the last 30-plus years.” 80 Fed. Reg. 67,840; *see also id.* (stating that, “[i]n the several decades since the steam electric ELGs were last revised, [more effective] technologies have increasingly been used at plants”). And the rule minces no words in laying the shortcomings of the prior ELGs at the feet of surface impoundments:

The processes employed and pollutants discharged by the industry look very different today than they did in 1982. Many plants, nonetheless, still treat their

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wastewater using only surface impoundments, which are largely ineffective at controlling discharges of toxic pollutants and nutrients.

Id.

Thus, the final rule describes impoundments as an outdated and ineffective pollution control technology, and yet the same rule chooses to freeze impoundments in place as BAT for legacy wastewater. That is inconsistent with the “technology-forcing” mandate of the CWA. *NRDC II*, 808 F.3d at 563-64 (citing *NRDC I*, 822 F.2d at 123). To that point, the Supreme Court has explained that BAT has an inbuilt “reasonable further progress” standard and that “BPT serves as the prior standard with respect to BAT.” *Nat’l Crushed Stone*, 449 U.S. at 75, 101 S.Ct. 295. Yet here EPA appears to have conflated the prior standard with the advanced one: It has selected as BAT the same three-decades-old technology previously set as BPT—a technology the current rule condemns as anachronistic and ineffective at eliminating pollution discharge. In other words, EPA asks us to believe that impoundments are both archaic and cutting-edge at the same time. That we cannot do. *See GameFly*, 704 F.3d at 148; *Chamber of Commerce*, 885 F.3d at 382.

Fourth, the final rule strongly indicates that other available technologies are far better than impoundments at removing pollutants from the various streams that comprise legacy wastewater. For instance, after explaining why impoundments are ineffective at removing toxic metals from FGD wastewater, the rule states that a combination of chemical precipitation and biological treatment *is* better at removing those pollutants. *Id.* at 67,850-51. Importantly, the rule explicitly concludes that “[c]hemical precipitation and biological treatment are *more effective than surface impoundments* at removing both soluble and particulate forms of metals.” *Id.* at 67,851 (emphasis added). The rule also relies on that reasoning to justify rejecting impoundments as BAT for fly ash transport water, bottom ash transport water, FGMC wastewater, and gasification wastewater. *Id.* at 67,852-53. Moreover, the rule categorically states that more advanced control methods, such as chemical and biological methods, “are affordable technologies that are widely available, and already in place at some plants.” *Id.* at 67,840.

These affirmative findings are difficult, if not impossible, to square with EPA’s decision nonetheless to set 1980s-era impoundments as the BAT for legacy wastewater. To be sure, the agency’s statements in the final rule do not prove that chemical precipitation or biological treatment (or some combination of the two) *are*

BAT for legacy wastewater. That is for the agency to decide. But those statements do cast ***1018** grave doubt on the agency’s selection of *impoundments* as BAT for legacy wastewater. *See, e.g., Nat’l Crushed Stone Ass’n*, 449 U.S. at 74, 101 S.Ct. 295 (BAT calls for the “maximum use of technology within the economic capability of the [plant] owner or operator”). Once again, the EPA’s own rule strongly indicates that it was arbitrary and capricious in doing so.²⁰

Fifth and finally, our court has long recognized that “Congress intended [BAT] limitations to be based on the performance of the single best-performing plant in an industrial field.” *Tex. Oil & Gas*, 161 F.3d at 928 (quoting *CMA*, 870 F.2d at 226)); *see also, e.g., Kennecott v. EPA*, 780 F.2d 445 (4th Cir. 1985) (“In setting BAT, EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible.”) (citing *A Legislative History of the Water Pollution Control Act Amendments of 1972*, 93d Cong., 1st Sess. (Comm. Print 1973), at 798). Yet here the rule says nothing to indicate that the choice of impoundments as BAT for legacy wastewater was based on anything like “the performance of the single best-performing plant” in the field. To the contrary, everything the rule says about the record of impoundments over the past three decades indicates that their performance in controlling discharges has been distinctly poor. *See, e.g.,* 80 Fed. Reg. 67,840 (stating that “impoundments ... are largely ineffective at controlling discharges of toxic pollutants and nutrients”); *id.* (stating that “[g]round water contamination from surface impoundments ... threatens drinking water, as evidenced by more than 30 documented cases”); *id.* at 67,851 (declining to set impoundments at BAT for FGD wastewater because various dissolved toxic metals “are not effectively and reliably removed by gravity in surface impoundments”). Moreover, the rule also states that multiple plants are in fact treating legacy wastewater using chemical precipitation, *id.* at 67,855 n.29, a method the rule concedes is “more effective than surface impoundments at removing both soluble and particulate forms of metals[.]” *Id.* at 67,851. Yet the rule merely states—without explanation—that it lacks “data to characterize the effluent from these systems.” *Id.* at 67,855 n.29. That unexplained assertion casts grave doubt on the agency’s BAT decision. *See also infra* V.A.2 (discussing additional problems created by agency’s lack of data excuse).

These shortcomings in the agency’s explanations strongly indicate that its BAT decision simply defaults to the outdated BPT standard that has been demonstrated to be a

poor performer by the agency's own analysis. That is antithetical to the statutorily-mandated BAT standard. *See, e.g., Nat'l Lime Ass'n v. EPA*, 233 F.3d 625, 634 (D.C. Cir.), *as amended on denial of reh'g* (2001) (remanding EPA rule *1019 for failure in agency's "clear statutory obligation to set emission standards" for various air pollutants); *NRDC v. EPA*, 863 F.2d 1420, 1433 (9th Cir. 1988) (despite EPA's asserted lack of "complete information" on availability of technology, declaring BAT limitation invalid because "Congress has demonstrated its intent to require industry to do as much as possible to control toxic discharges") (citing 33 U.S.C. § 1311(b)(2)(A)(i)).

In sum, we conclude that the EPA's decision to set surface impoundments as BAT for legacy wastewater was arbitrary and capricious. Far from demonstrating that impoundments are the "best available technology economically achievable" for treating legacy wastewater, the evidence recounted in the final rule shows that impoundments are demonstrably ineffective at doing so and demonstrably inferior to other available technologies. In light of this record, we cannot accept that an outdated, ineffective and inferior technology is BAT when applied to legacy wastewater. No record evidence affirmatively makes that case and, as we have explained, the evidence recounted in the final rule runs in the opposite direction.

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EPA defends its choice of impoundments as BAT for legacy wastewater by asserting that "it does not have the data" to justify choosing more advanced pollution control technologies. 80 Fed. Reg. 67,855. The agency explains that most plants "combine some of their legacy wastewater with each other and with other wastestreams," and that this "commingling" can meaningfully alter the characteristics (specifically, the "flow rate and pollutant concentration") of the impoundment water. *Id.* Because EPA lacked adequate examples of plants treating commingled wastewater "using anything beyond the surface impoundment itself," the agency concluded it lacked data to evaluate the performance of other technologies and therefore defaulted to "the previously promulgated BPT limitations" (*i.e.*, impoundments). *Id.* We are unpersuaded.

First, EPA's arguments about the characteristics of commingled wastewater glide past the key issue before us, which is whether the agency arbitrarily chose

impoundments as BAT. The agency may lack data on how other technologies interact with commingled wastewater, but it assuredly does not lack data on impoundments. To the contrary, we know that impoundments are ineffective at removing toxic pollutants from the various wastewater streams because the agency's own rule tells us so, repeatedly, based on over three decades of observation and analysis. *See supra* V.B.1. Nor does EPA's criticism of impoundments distinguish "legacy" from "non-legacy" wastewater: instead, the agency categorically states that "surface impoundments ... are largely ineffective at controlling discharges of toxic pollutants and nutrients" from "wastewater." 80 Fed. Reg. 67,840. To be sure, we do not pretend to second-guess EPA's assertions about the pertinent "flow rate" and "pollutant concentration" in commingled wastewater, *id.* at 67,855, matters beyond our expertise and authority. But those assertions side-step the legal issue we must decide, which is whether the agency was arbitrary in selecting impoundments as BAT.²¹ Once *1020 again, the agency's own pointed criticism of impoundments indicates that it was.

Second, the agency's "lack of data" excuse is untenable on its own terms. In a footnote, the rule concedes that multiple power plants have in fact been using chemical precipitation to treat commingled legacy wastewater. *See id.* at 67,855 n.29 (stating "EPA identified fewer than ten plants that use chemical precipitation to treat waster that contains, among other things, ash transport water"). Yet, the agency baldly asserts that it "does not have any data to characterize the effluent from these systems" and it raises this dearth of information to justify not regulating legacy wastewater under the same BAT standards as non-legacy wastewater (and to justify a demonstrably outdated technology as BAT). *Id.* We have previously rejected EPA's argument that an asserted lack of "sufficient data" justified the agency's failure to regulate. *See API I*, 661 F.2d at 357 (rejecting EPA's argument that its failure to regulate was justified by lack of "sufficient data" where EPA had failed to investigate "in light of ... new information" (internal quotation marks omitted)); *see also, e.g., NRDC II*, 808 F.3d at 573 (concluding that EPA's failure to gather data can be arbitrary and capricious when the lack of data is "a problem of EPA's own making"); *see also infra* V.B.2 (further discussing *API I* and *NRDC II*). We reject the argument again here. The final rule recounts (1) the long-recognized deficiencies of impoundments in controlling toxic discharges, 80 Fed. Reg. 67,840; (2) the demonstrated superiority of more advanced technologies in doing so, *id.* at 67,851-53; (3) the availability of those technologies in the industry, *id.* at 67,840, 67,844; and (4) multiple plants' actual use of one of those advanced technologies

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(chemical precipitation) to treat commingled legacy wastewater, *id.* at 67,855 n.29. Given those undisputed statements drawn from EPA's own rule, the agency cannot simply plead a lack of data to justify its decision to set impoundments as BAT. Again, we do not purport to tell the agency what technology it *should* choose as BAT for legacy wastewater. We decide only that, given the agency's own statements and evidence, it acted arbitrarily in selecting as BAT a pollution control method that decades of data have shown to be ineffective at controlling pollution.

Third, given EPA's heavy reliance on the characteristics of *commingled* legacy wastewater as a reason for declining stricter regulation, one would expect a different policy for *non-commingled* legacy wastewater. *See* 80 Fed. Reg. 67,855 & n.28 (asserting as key reason for defaulting to impoundments for legacy wastewater the fact that wastewater at the "vast majority" of plants is "commingled" with other streams). Yet we find the opposite: When EPA identified plants that discharge non-commingled legacy wastewater from impoundments, it *still* declined to impose more stringent controls and *still* defaulted to impoundments as BAT. *See id.* at 67,855 (declining to impose controls "other than surface impoundments" on plants that "discharge from an impoundment containing *only* legacy FGD wastewater"); *id.* at 67,855 n.30 (discussing three plants that use impoundments "where the FGD wastewater is *not* commingled with other process wastewaters in the impoundment") (emphases added). That striking inconsistency undercuts the agency's "commingling" rationale for not imposing the more *1021 stringent non-legacy BAT standards. *See, e.g., Am. Fed'n of Gov't Emps., Local 2924 v. Fed. Labor Relations Auth.*, 470 F.3d 375, 380 (D.C. Cir. 2006) (an agency's decision is "arbitrary and capricious" if "illogical on its own terms"); *see also Chamber of Commerce*, 885 F.3d at 382 ("Illogic and internal inconsistency are characteristic of arbitrary and unreasonable agency action.").²² What is more, by selecting impoundments as BAT for *any* kind of FGD wastewater ("legacy" or not), the rule flatly contradicts itself: The rule states without exception that for FGD wastewater "[c]hemical precipitation and biological treatment are more effective than surface impoundments at removing" toxic pollutants. 80 Fed. Reg. 67,851.

¹⁹Fourth, even assuming a lack of data prevented EPA from determining BAT for legacy wastewater, nothing required the agency simply to set impoundments as BAT. Instead, EPA could have declined to set nationwide effluent guidelines for legacy wastewater and allowed BAT determinations to be made by each facility's

permitting authority through the NPDES permitting process on a site-specific basis. *See* 40 C.F.R. § 125.3(a), (c)(2) ("Technology based treatment requirements may be imposed ... [o]n a case-by-case basis."); *Riverkeeper, Inc. v. EPA*, 358 F.3d 174, 203 (2nd Cir. 2004) ("We see no textual bar in sections 306 or 316(b) [of the Clean Water Act] to regulating [certain] structures on a case-by-case basis."); *Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 566-67 (D.C. Cir. 2002) ("We believe EPA acted both reasonably and within its authority in adopting a case-by-case approach" to regulating certain pollutants from paper mills). The agency took that approach in the current rule by deferring setting BAT and other limits for metal cleaning wastes, after determining it lacked the necessary data. *See* 80 Fed. Reg. 67,863 (directing permitting authorities to "establish such requirements based on [best professional judgment] for any steam electric power plant discharg[ing]" such waste). Instead of deferring a nationwide effluent guideline and allowing case-by-case determination of BAT by permitting authorities, EPA unaccountably defaulted to impoundments—again, which its own rule recognizes as an out-of-date and ineffective pollution control technology. This is further indication that the rule *1022 respecting legacy wastewater is arbitrary and capricious.²³

In sum, having examined the various justifications set forth for EPA's final rule on legacy wastewater, and finding each of those explanations wanting in light of the agency record, we conclude that EPA's rulemaking was arbitrary and capricious. We therefore set aside that part of the final rule and remand to the agency for reconsideration. *See, e.g., Perdue v. FAA*, 172 F.3d 866 (5th Cir. 1999) ("This court shall set aside agency action that is 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.' " (quoting 5 U.S.C. § 706(2)(A))); *Checkosky v. SEC*, 23 F.3d 452, 491 (D.C. Cir. 1994) ("Section 706(2)(A) [of the APA] provides that a 'reviewing court' faced with an arbitrary and capricious agency decision 'shall'—not may—"hold unlawful and set aside" the agency action.").

We recognize that the agency is entitled to considerable deference in setting BAT limitations. *See, e.g., BCCA Appeal Grp.*, 355 F.3d at 824 (EPA entitled to special deference where its decision turns on "its evaluation of complex scientific data within its technical expertise"); *Tex. Oil. & Gas*, 161 F.3d at 928 (recognizing EPA's "considerable discretion" in weighing BAT factors). Precisely for that reason, challenges to the agency's BAT determinations often fail because challengers ask the

court to elevate itself as an expert over the agency.²⁴ This case is different. We do not question the scientific or statistical methodologies relied upon by EPA, nor second-guess its weighing of the statutory factors. Instead, we rely on EPA's own scientific conclusions in the rule itself to conclude that its choice of an outdated and ineffective technology as BAT was unlawful under the Act. That is a legal—not a technical or scientific—conclusion that the APA requires us to make.

*1023 B. Challenge to Leachate Regulation

We turn to the challenge to the rule's regulation of combustion residual leachate. As explained, *supra* I.B.2, leachate consists of liquid that percolates through a landfill or impoundment and is eventually discharged into water. See 80 Fed. Reg. 67,847. The final rule sets BAT for leachate as impoundments, which is the same as the previous BPT for leachate established in 1982. See *id.* at 67,854 (“This rule identifies surface impoundments as the BAT technology basis for control of pollutants in combustion residual leachate ... establish[ing] a BAT limitation on [total suspended solids] in ... leachate equal to the previously promulgated BPT limitation on [total suspended solids] in low volume waste sources.”). EPA offers two justifications for this decision: First, that “[c]ommenters did not provide information that EPA could use to establish [stricter] BAT limitations” for leachate, and, second, that because leachate forms a “very small portion” of overall discharges, the rule’s stricter regulation of *other* wastestreams “already represents reasonable further progress towards the CWA’s goals.” See *id.*; *supra* I.B.2.

The Environmental Petitioners challenge the rule’s leachate regulation under the *Chevron* test for reviewing agency interpretations of statutes. See *Chevron*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694; see also generally, e.g., *Acosta v. Hensel Phelps Constr. Co.*, 909 F.3d 723, 730 (5th Cir. 2018) (summarizing “the two-step framework established in *Chevron*”); Richard J. Pierce, Jr., *Administrative Law Treatise* § 3.2 (“PIERCE”) (discussing “[t]he *Chevron* Two-Step”). Petitioners assert that EPA’s decision to set impoundments as BAT for leachate fails *Chevron* step one by contravening the plain text and structure of the Clean Water Act. Alternatively, petitioners argue that the agency’s decision fails *Chevron* step two by adopting an impermissible construction of the Act. We address each argument in turn.

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^[10] ^[11]At *Chevron* step one, we ask whether the pertinent statute “unambiguously foreclose[s]” the agency’s challenged statutory interpretation; if it does, “‘that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.’” *U.S. Chamber of Commerce v. U.S. Dep’t of Labor*, 885 F.3d 360, 369 (5th Cir. 2018) (quoting *Chevron*, 467 U.S. at 842-43, 104 S.Ct. 2778); see also, e.g., *Acosta*, 909 F.3d at 730 (at *Chevron* step one, the court “must determine ‘whether Congress has directly spoken to the precise question at issue’” (quoting *City of Arlington v. FCC*, 569 U.S. 290, 296, 133 S.Ct. 1863, 185 L.Ed.2d 941 (2013))). To answer this question, we rely on “the conventional standards of statutory interpretation”—i.e., “text, structure, and the overall statutory scheme”—as well as “authoritative Supreme Court decisions.” *U.S. Chamber of Commerce*, 885 F.3d at 369 (citing *City of Arlington*, 569 U.S. at 296, 133 S.Ct. 1863; *Chevron*, 467 U.S. at 843 n.9, 104 S.Ct. 2778). We are not to focus myopically on “a particular statutory provision in isolation” because “[t]he meaning—or ambiguity—of certain words or phrases may only become evident when placed in context.” *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 132, 120 S.Ct. 1291, 146 L.Ed.2d 121 (2000). Rather, we must read words “‘in their context,’ ” interpreting the statute “‘as a symmetrical and coherent regulatory scheme,’ ” and “‘fit[ting], if possible, all [the statute’s] parts into an harmonious whole.’ ” *Id.* at 133, 120 S.Ct. 1291 (quoting *Davis v. Mich. Dep’t of Treasury*, 489 U.S. 803, 809, 109 S.Ct. 1500, 103 L.Ed.2d 891 (1989); *1024 *Gustafson v. Alloyd Co.*, 513 U.S. 561, 569, 115 S.Ct. 1061, 131 L.Ed.2d 1 (1995); *FTC v. Mandel Bros., Inc.*, 359 U.S. 385, 389, 79 S.Ct. 818, 3 L.Ed.2d 893 (1959)) (brackets added). Additionally, “we must be guided to a degree by common sense as to the manner in which Congress is likely to delegate a policy decision of such economic and political magnitude to an administrative agency.” *Texas v. United States*, 787 F.3d 733, 760 (5th Cir. 2015) (quoting *Brown & Williamson*, 529 U.S. at 133, 120 S.Ct. 1291). The goal of our *Chevron* step one inquiry is ultimately to “ascertain whether the statute is silent or ambiguous in addressing the precise question at issue.” *Tex. Savings & Cmty. Bankers Ass’n v. Fed. Hous. Fin. Bd.*, 201 F.3d 551, 554 (5th Cir. 2000); see also PIERCE § 3.6 (“The question for the court [at step one] is whether the agency’s construction of the language is within the range of meanings that could be plausibly attributed to the

relevant statutory language.”).

Petitioners’ step one attack targets the agency’s justifications for pegging leachate BAT to the same technology set as BPT in 1982—specifically, EPA’s explanation that leachate forms a “very small portion” of collective industry discharges and that the rule’s stricter BAT for other wastestreams represents reasonable overall progress in the industry. *See* 80 Fed. Reg. 67,854. Petitioners’ various arguments may be grouped into three general categories for convenience of analysis. First, petitioners argue the agency’s rationales contravene the CWA’s text—requiring a BAT to eliminate discharges of “all pollutants” if “technologically and economically achievable,” 33 U.S.C. § 1311(b)(2)(A) (emphasis added)—because, here, the agency has chosen *not* to regulate a significant pollution source (leachate) with a technology EPA admits is achievable (chemical precipitation). Second, petitioners argue the agency’s decision on the proper control standard for leachate conflates BAT with BPT in a way that contravenes the structure of the Act. Finally, petitioners claim that the agency’s proffered justifications for its leachate regulation appear nowhere in the factors mandated for determining BAT and, indeed, contradict those factors. *See* 33 U.S.C. § 1314(b)(2)(B) (listing BAT factors).

Petitioners’ initial step one argument places too much weight on the phrase “all pollutants” in § 1311(b)(2)(A). We cannot agree that this statutory phrase, standing alone, squarely forecloses the agency’s decision to maintain leachate BAT at the 1982 BPT standard. To the contrary, we agree with EPA (and with binding precedent) that we must interpret that phrase in context and with reference to the larger statutory scheme. *See, e.g., Brown & Williamson*, 529 U.S. at 132, 120 S.Ct. 1291 (at step one courts should not examine statutory provisions “in isolation” but must “interpret the statute as a symmetrical and coherent regulatory scheme” (internal quotes and citations omitted)). Section 1311(b)(2)(A) does not flatly require that a BAT standard “eliminate[] the discharge of all pollutants” solely if the Administrator finds such elimination “technologically and economically achievable,” as petitioners claim.²⁵ Rather, the phrase petitioners rely on is nested in a complex provision providing that certain effluent limitations

Administrator pursuant to section 1314(b)(2) of this title.

Id. (emphasis added). The italicized portion of § 1311(b)(2) cross-references the factors set forth in § 1314(b)(2) that are “to be taken into account” by the Administrator in determining BAT for a given point source. *See id.* § 1314(b)(2)(B) (requiring certain “factors relating to the assessment of [BAT]” shall “be taken into account in determining the best measures and practices available to comply with subsection (b)(2) of section 1311 of this title”). The statute requires us to read these two sections in harmony with each other. *See, e.g., Doe v. KPMG*, 398 F.3d 686, 688 (5th Cir. 2005) (requiring that we “read all parts of the statute together to produce a harmonious whole” (citation omitted)). And we have held that the Administrator has “considerable discretion” in evaluating the cross-referenced § 1314(b)(2) factors when making a BAT determination. *See, e.g., Tex. Oil & Gas*, 161 F.3d at 928 (citing *NRDC v. EPA*, 863 F.2d 1420, 1426 (9th Cir. 1988)). Consequently, it is not the case that § 1311(b)(2)(A)—standing apart from the factors in § 1314(b)(2)—unambiguously required EPA to set a stricter BAT for leachate. We therefore reject petitioners’ step one argument based on the text of § 1311(b)(2)(A).

^[25]We agree with petitioners, however, that the leachate rule conflates the BAT and BPT standards in a way not permitted by the statutory scheme. The rule pegs BAT for leachate to the decades-old BPT standard, without offering any explanation for why that prior standard is now BAT. That is flatly inconsistent with the Act’s careful distinction between the two standards. As explained, the difference between BAT and BPT is critical to the Act’s “technology-forcing” scheme. *Supra* I.A (quoting *NRDC I*, 822 F.2d 104, 123). BPT is merely the “first step” towards the Act’s pollution reduction goals and provides the “prior standard” against which the stricter BAT is to be measured. *Nat’l Crushed Stone*, 449 U.S. at 69, 101 S.Ct. 295; *id.* at 75 & n.14, 101 S.Ct. 295; *CMA*, 870 F.2d at 196. To that point, Congress designed BPT to reflect merely an average of the best performance levels of existing plants, *CMA*, 870 F.2d at 203, whereas it designed BAT to reflect “ ‘the performance of the single best-performing plant in an industrial field.’ ” *Tex. Oil & Gas*, 161 F.3d at 928 (quoting *CMA*, 870 F.2d at 226). And this critical distinction is reflected in the Act’s structure, which treats BAT and BPT in different subsections, implements them on different timelines, and evaluates them under different factors. *Compare* 33 U.S.C. §§ 1311(b)(1)(A), 1314(b)(1)(A), 1314(b)(1)(B) (specifying BPT applicability, timeline, and factors), *with id.* §§ 1311(b)(2)(A), (C), (D) & (F), 1314(b)(2)(B) (specifying BAT applicability, timelines, and factors); *see*

*1025 shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him[,] ... that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the

also 80 Fed. Reg. 67,843 (distinguishing BPT and BAT).

Yet, in the face of this statutory structure, the rule sets BAT for leachate “equal to the [prior] BPT limitation”—i.e., impoundments. 80 Fed. Reg. 67,854. The rule reaches that decision without explaining why a technology selected in 1982 under the laxer BPT standard somehow meets the stricter BAT standard today. That is particularly inexplicable given the rule’s recognition that impoundments have proven “largely ineffective” at pollution control over the past decades, *id.* at 67,840, 67,851-53; *see supra* I.B. And, as we have seen, it was the recognized shortcomings of impoundments—shortcomings with respect *1026 to leachate discharges as well as other wastestreams—that led the agency to revise the steam-electric effluent guidelines in the first place. *Id.* at 67,840; *supra* I.B.

To be sure, we do not say that EPA is precluded by the Act from *ever* setting BAT equivalent to a prior BPT standard. But given the plain distinction between the two standards marked out in the Act, the agency would at least have to offer some explanation for its decision that speaks to the statutory differences between BAT and BPT. Here we are given nothing along those lines. Consequently, the only conclusion we can draw from this record is that, in setting BAT for leachate, the agency simply defaulted to the prior BPT. As explained, however, the statutory scheme does not confer authority on the agency to collapse the carefully-wrought distinction between BAT and BPT in this manner. *See, e.g., Texas v. United States*, 497 F.3d 491, 501 (5th Cir. 2007) (“*Chevron* deference comes into play, of course, only as a consequence of statutory ambiguity, and then only if the reviewing court finds an implicit delegation of authority to the agency.”).

^[13]We also agree with petitioners that the agency’s proffered justifications for the leachate rule are not supported—indeed, are likely incompatible with—the factors set forth under the Act for determining BAT. “The first [*Chevron* step] determines whether Congress intended to give the agency any discretion,” *La Union Del Pueblo Entero v. FEMA*, 608 F.3d 217, 220 (5th Cir. 2010), and we are unpersuaded that Congress gave the EPA discretion to rely on justifications like these. As explained, the agency excuses its lax leachate BAT by appealing to (1) the relatively “small” amount of pollutants discharged in leachate, and (2) the stricter BATs set for larger industry wastestreams. *See* 80 Fed. Reg. 67,854. Yet neither of these considerations implicates any of the factors the Act requires the Administrator to consider in determining BAT for a given point source. *See* 33 U.S.C. § 1314(b)(2)(B) (requiring

that regulations “shall take into account” specified “[f]actors relating to the assessment of best available technology” with respect to “any point source ... within such categories or classes”).

The Act specifies the following BAT factors:

[1] the age of equipment and facilities involved, [2] the process employed, [3] the engineering aspects of the application of various types of control techniques, [4] process changes, [5] the cost of achieving such effluent reduction, [6] non-water quality environmental impact (including energy requirements), and [7] such other factors as the Administrator deems appropriate[.]

Id. (brackets added). These factors cannot be stretched to accommodate the agency’s rationales for its leachate BAT. That is, no factor allows the agency to consider the amount of pollutants generated by a one wastestream relative to other streams. Nor does any factor allow the agency to consider whether less stringent regulation of one wastestream may be set off against the benefits of regulating *other* streams more strictly. *See, e.g., Tex. Oil & Gas Ass’n*, 161 F.3d at 928 (explaining that “CWA specifies several factors that *must* be considered by the EPA in determining BAT limits” (emphasis added)). Thus, on their face, the justifications for the leachate BAT put forward in the rule fall outside of the factors mandated by the Act for determining BAT. *See, e.g., API II*, 858 F.2d at 264 (“Before EPA selects BAT-level limitations, it is *required* to address both (1) operational considerations, including ‘the process employed, the engineering aspects of the application of various types of control techniques [and] process changes,’ and (2) cost” (emphasis added)).

*1027 What is more, the agency’s benefit-weighting appears incompatible with the BAT factors and with the broader statutory scheme. Whether BAT factors always preclude weighing regulatory benefits against other considerations is an open question. *See Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 221, 129 S.Ct. 1498, 173 L.Ed.2d 369 (2009) (declining to resolve whether “cost-benefit analysis is precluded under the [BAT] ... test[]”).²⁶ We need not address that question here, because we conclude that the agency’s benefit-weighting in this case contravenes the statute. As explained, the rule explicitly justifies a less stringent BAT for leachate by touting the benefits of stricter BATs for *other* wastestreams. But the Act does not permit the agency to set a BAT by playing one pollution source off against another. As petitioners point out, the Act instead requires a BAT determination to be made with respect to a discrete “point source.” 33 U.S.C. § 1314(b)(2)(B). A “point

source” is defined as “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.” *Id.* § 1362(14). This broad definition easily includes leachate, and the rule leaves no doubt that it treats leachate as a distinct point source. *See* 80 Fed. Reg. 67,847 (treating “combustion residual leachate” from landfills or impoundments as a separate wastestream). The Act thus specifically requires the BAT factors be applied with respect to a specific point source—here, leachate. *See* 33 U.S.C. § 1314(b)(2)(B) (providing that regulations “shall ... specify factors to be taken into account in determining the best measures and practices available to comply with [the BAT requirements in § 1311(b)(2)] *applicable to any point source* ... within such category or classes” (emphasis added)). But in the final rule the agency has explicitly factored into its BAT determination the regulation of wastestreams other than leachate, which contravenes the plain text and structure of the Act.

^[14]EPA’s principal argument in response is that the Act allows consideration of “other factors as the Administrator deems appropriate,” 33 U.S.C. § 1314(b)(2)(B), which permits it to consider the “very small” size of leachate pollution relative to the overall industry. Because leachate represents only about 3 percent of overall industry pollution, EPA claims, the rule still represents “reasonable progress” towards eliminating pollution because of the rule’s regulation of *1028 other sources. *See* 33 U.S.C. § 1311(b)(2)(A). Even accepting EPA’s characterization of leachate pollution as “very small” (something we address at *Chevron* step two, *infra*), we reject the agency’s reliance on the “other factors” clause. Like any statute, we must interpret the Clean Water Act by “looking at the full text of the statute, rather than one isolated clause, along with the statute’s structure and its public safety purpose[.]” *United States v. Transocean Deepwater Drilling, Inc.*, 767 F.3d 485, 496 (5th Cir. 2014). As petitioners correctly point out, the agency’s “other factors” argument would undermine the concept of BAT altogether. The BAT factors are designed to support achievement of an effluent limitation that “shall require the elimination of discharges of all pollutants,” if “technologically and economically achievable.” 33 U.S.C. § 1311(b)(2)(A) (citing *id.* § 1314(b)(2)). But accepting the agency’s expansive view of the “other factors” clause would allow it, in every case, to justify a less stringent BAT for one pollution source by claiming it was regulating *other* sources more strictly and thus making reasonable progress in the industry “as a

whole.” On this understanding, the BAT standard would cease to have any meaning. We therefore reject EPA’s reliance on the “other factors” clause to support its justification for the leachate regulation.²⁷

In sum, we conclude that the BAT determination for leachate fails step one of *Chevron*.

2.

^[15] ^[16] ^[17]Alternatively, we conclude that the leachate regulation fails step two of *Chevron*. For purposes of this analysis, we assume that the CWA is “silent or ambiguous” with respect to the question addressed by the rule, and we ask only “whether the agency’s answer is based on a *permissible* construction of the statute.” *Acosta*, 909 F.3d at 730 (quoting *City of Arlington*, 569 U.S. at 296, 133 S.Ct. 1863; *Chevron*, 467 U.S. at 843, 104 S.Ct. 2778). “We do not simply impose our own construction on the statute.” *BNSF Ry. Co. v. United States*, 775 F.3d 743, 751 (5th Cir. 2015) (cleaned up) (quoting *Chevron*, 467 U.S. at 843, 104 S.Ct. 2778). “The agency’s view ‘governs if it is a reasonable interpretation of the statute—not necessarily the only possible interpretation, nor even the interpretation deemed most reasonable by the courts.’ ” *Acosta*, 909 F.3d at 735 (quoting *Coastal Conserv’n Ass’n v. U.S. Dep’t of Commerce*, 846 F.3d 99, 106 (5th Cir. 2017); *Riverkeeper*, 556 U.S. at 218, 129 S.Ct. 1498). While this is a highly deferential standard, an agency interpretation can fail *Chevron* step two if “it is contrary to clear congressional intent or frustrates the policy Congress sought to implement.” *Garcia-Carias v. Holder*, 697 F.3d 257, 271 (5th Cir. 2012). Agency action that is “arbitrary, capricious, or manifestly contrary to the statute” also fails step two. *Tex. Coal. of Cities for Util. Issues v. FCC*, 324 F.3d 802, 807 (5th Cir. 2003) (quoting *Chevron*, 467 U.S. at 844, 104 S.Ct. 2778). Because *Chevron* step two and the APA share the “arbitrary and capricious” standard, “[t]he APA reflects the principles of *Chevron*,” and analysis under the two standards proceeds similarly. *Nutraceutical Corp. v. Von Eschenbach*, 459 F.3d 1033, 1038 (10th Cir. 2006); *see also, e.g.,* PIERCE § 3.6 (suggesting that *Chevron* step two has “complete overlap” *1029 with APA test of whether a rule adopts an “unreasonable” statutory interpretation) (quoting *Animal Legal Def. Fund v. Glickman*, 204 F.3d 229, 234 (D.C. Cir. 2000)).

^[18]Petitioners argue that the agency’s decision to set

surface impoundments as BAT for leachate is based on an impermissible interpretation of the Act. They raise arguments similar to the ones raised under step one—*i.e.*, that the agency acted unreasonably by setting a leachate BAT based on its relative size and on the rule's stricter regulation of other streams. Additionally, petitioners argue that the agency rejected more effective, achievable control technologies (like chemical precipitation) in favor of a less effective technology like impoundments, which "is unreasonable because it cannot be squared with Congress's intent for BAT to be more stringent than BPT limits." We agree with petitioners that the leachate regulation is based on an impermissible interpretation of the Act. We therefore hold that the regulation fails *Chevron* step two and must be vacated on that alternative basis as well.

First, the rule unreasonably sets as BAT a technology the rule itself deems ineffective at controlling toxic discharges from leachate. As already explained, *supra* V.B.1, the final rule categorically recognizes that impoundments are ineffective at removing toxic pollutants from wastewater, 80 Fed. Reg. 67,840, 67,851, which is why the rule declined to set impoundments as BAT for five of the six wastestreams at issue, *id.* at 67,852-53. Nothing in the rule even hints, much less explains, that impoundments are somehow better at controlling harmful discharges from leachate. To the contrary, the rule recounts that groundwater contamination from impoundments (which are "the most widely used systems to treat ... leachate") has resulted in numerous documented cases of drinking water pollution. *Id.* at 67,840, 67,847; *see also id.* at 67,847 (defining "leachate" as "liquid ... that has percolated through or drained from waste or other materials placed in a landfill, or that passes through the containment structure ... of a surface impoundment"); *id.* (explaining that "[u]nlined impoundments and landfills ... allow the leachate to potentially migrate to nearby ground waters, drinking water wells, or surface water"). The rule also refers to an environmental assessment document, *id.* at 67,840, which reports that "[c]ombustion residual leachate can migrate from the site in the ground water at concentrations that could contaminate public or private drinking water wells and surface waters, even years following disposal of combustion residuals." *See Environmental Assessment Document* No. EPA-821-R-15-006, § 3.3.2. Given these admitted deficiencies in impoundments, it was unreasonable to adopt them as BAT for leachate. *See State Farm*, 463 U.S. at 43, 103 S.Ct. 2856 ("Normally, an agency rule would be arbitrary and capricious if the agency has ... offered an explanation for its decision that runs counter to the evidence before the agency.").

Second, the rule unreasonably declines to set as BAT available technologies that are admittedly more effective at controlling leachate discharges. We have already detailed the rule's affirmation that available modern technologies like chemical precipitation "are more effective than surface impoundments at removing both soluble and particulate forms of metals." 80 Fed. Reg. 67,851; *supra* V.B.1. The rule never explains why this blanket statement does not apply to the use of impoundments to treat leachate. Indeed, EPA acknowledged during the rulemaking process that "chemical precipitation is an available and demonstrated technology for the treatment of combustion residual leachate." *See EPA's Response to Public Comments*, SE05958, at 7-20. And EPA's *1030 counsel conceded at oral argument that chemical precipitation is "available" as a treatment for leachate. Oral Argument Audio at 22:25-22:45 (Oct. 3, 2018). As with its treatment of legacy wastewater, the rule appears to select a BAT for leachate simply by defaulting to the decades-old and demonstrably ineffective BPT standard. We have already explained that this kind of regulation-by-inertia is inconsistent with the "technology-forcing" mandate of the CWA. *See NRDC II*, 808 F.3d at 563-64; *NRDC I*, 822 F.2d at 123; *supra* V.B.1. Moreover, a decision to leave BPT limitations in place for leachate, when those limitations were based on admittedly ineffective technology, does not reflect "a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges," which was the intent of Congress in enacting BAT standards in the first place. *Nat'l Crushed Stone Ass'n*, 449 U.S. at 74, 101 S.Ct. 295. The EPA's decision to rest on its laurels (questionable as they are) respecting leachate thus "frustrates the policy Congress sought to implement" in the CWA, *see Garcia-Carias*, 697 F.3d at 271, and cannot stand.

Our decision in *Chemical Manufacturers Association v. EPA*, 870 F.2d 177, reinforces our conclusion on this point. That case involved a challenge to BAT and NSPS regulations set for water pollution by organic chemicals and synthetics plants. *Id.* at 261. In setting NSPS limits for these plants, EPA did not consider recycling as a possible NSPS technology, even though the evidence before it showed that plants could achieve zero discharge by using recycling. *Id.* at 262-63. We concluded that the agency's failure even to consider recycling, an "available demonstrated technology," was arbitrary and capricious. *Id.* at 264. Our case is analogous: here we have the known shortcomings of the status quo technology (impoundments), and the demonstrated superiority of

Southwestern Electric Power Company v. United States..., 920 F.3d 999 (2019)

available alternatives (chemical precipitation). To be sure, EPA was entitled to deference on NSPS standards just as it is on BAT standards, *id.* at 263, but deference runs out when the agency fails to consider an option with all the indicators of being a superior choice. Just so here. An “[u]nexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious,” and “[a]n arbitrary and capricious regulation of this sort is itself unlawful and receives no *Chevron* deference.” *Encino Motorcars, LLC v. Navarro*, — U.S. —, 136 S.Ct. 2117, 2126, 195 L.Ed.2d 382 (2016) (citing *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 981, 125 S.Ct. 2688, 162 L.Ed.2d 820 (2005); *United States v. Mead Corp.*, 533 U.S. 218, 227, 121 S.Ct. 2164, 150 L.Ed.2d 292 (2001)).

Finally, we note that the EPA has described leachate as being chemically similar to FGD wastewater, a wastestream admittedly susceptible to effective treatment by chemical and biological methods. See 80 Fed. Reg. 67,851; see also *EPA’s Response to Public Comments*, SE05958, at 7-20. It puzzles us that the EPA has described two wastestreams as chemically similar, and susceptible to treatment by the same methods, and yet has set strikingly different BAT standards for each. As with legacy wastewater, the agency’s rationales contradict themselves. The BAT determination for leachate is “illogical on its own terms” and therefore cannot stand. See, e.g., *GameFly*, 704 F.3d at 148 (D.C. Cir. 2013) (facially illogical determinations are arbitrary and capricious).

EPA offers two justifications for selecting impoundments as BAT for leachate—the first based on the agency’s lack of data about alternatives, and the second based on the relative size of the leachate wastestream. We find neither persuasive.

First, we are unpersuaded by the agency’s argument that “[c]ommentators did *1031 not provide information that EPA could use to establish BAT limitations” concerning leachate. 80 Fed. Reg. at 67,854. During its lengthy study period beginning in 2005, not only did EPA have adequate opportunity to collect data on various treatment options for leachate, but the agency *did* collect data on the size of leachate pollution and on the benefits of chemical precipitation. See 80 Fed. Reg. 67,854 (“EPA considered whether technologies in place for treatment of other wastestreams” could be used to treat leachate); *TDD*, EPA-821-R-15-007, at 10-39 (table showing potential reduction in leachate pollution of 33,800 toxic-weighted pound equivalents by adopting chemical precipitation). These data were certainly enough to demand further

inquiry and, of course, they say nothing to justify setting impoundments as BAT.

^[19]We have before declined to accept lack of data as a valid excuse for an agency’s failure to regulate activity that concededly creates pollution, and we decline again here. In *API I*, for instance, we rejected EPA’s attempt to justify failing to regulate “stripper gas wells” based on its claim that “there was not sufficient data” to justify regulation. 661 F.2d at 357. We reasoned that, in the three years since EPA had declined to regulate, ample public data on the wells “belie[d] EPA’s contention that there exists nothing to regulate.” *Id.* We therefore remanded for further agency consideration “in light of this new information.” *Id.* Here, impoundments have been in operation for over three *decades*, and, as we have discussed at length, the agency’s own rule amply demonstrates their ineffectiveness in controlling discharges from wastestreams including leachate. The agency cannot rely on a lack of data to justify its setting a BAT standard based on demonstrably outdated and ineffective technology.²⁸

^[20]EPA counters this point by asserting that it “identified *no* existing plants using chemical precipitation to treat their leachate.” We take EPA at its word, as we must, but the agency misses the point. Under our precedent, a technological process can be deemed “available” for BAT purposes “even if it is not in use at all,” or if it is used in unrelated industries. *API II*, 858 F.2d at 265. “Such an outcome is consistent with Congress’[s] intent to push pollution control technology.” *Id.* In this case, technologies alternative to surface impoundments are in use in the steam-electric industry, just in separate wastestreams. See, e.g., 80 Fed. Reg. 67,855 n.29. If technologies from other industries can be considered, then, *a fortiori*, technologies within the same industry should be considered when the status quo technology in place for a wastestream is admittedly ineffective. The final rule itself recognizes this point. See 80 Fed. Reg. 67,843 (“BAT is intended to reflect the *1032 highest performance in the industry, and it may reflect a higher level of performance than is currently being achieved based on technology transferred from a different category or subcategory, bench scale or pilot studies, or foreign plants.” (citing *Am. Paper Inst. v. Train*, 543 F.2d 328, 353 (D.C. Cir. 1976); *Am. Frozen Food Inst. v. Train*, 539 F.2d 107, 132 (D.C. Cir. 1976)). In any event, EPA’s argument ignores the fact that during notice-and-comment it *admitted* that “chemical precipitation is an available and demonstrated technology for the treatment of combustion residual leachate,” based on the technology’s use in treating a similar wastestream (FGD wastewater). See

EPA's Response to Public Comments, SE05958, at 7-20.

^[21]Second, we reject the EPA's argument that its regulation is justified by the fact that leachate pollution constitutes "a very small portion of the pollutants discharged collectively by all steam power plants." 80 Fed. Reg. 67,854. As already explained at step one, *supra* V.B.1, this consideration finds scant support in the statutory scheme given that the relative size of a stream is absent from the statutory BAT factors. But even assuming the statute allows the agency to consider the relative size of a pollution source in setting BAT, we find the EPA's use of that consideration here to be unreasonable.

The agency's argument involves some sleight of hand. Leachate discharges may constitute "a very small portion" of pollutants, 80 Fed. Reg. 67,854, but only by comparison to *all* pollution from the *entire* steam-electric power plant industry, which is largest collective source of water pollution in the country. *Id.* at 67,839-40.²⁹ In an absolute sense, however, leachate pollution is not a "very small portion" of anything. If leachate were a separate industry, it would rank as the 18th-largest source of water pollution in the United States. *See TDD*, EPA-821-R-15-007, at 10-39 (table showing toxic-weighted pollution from leachate); *Annual Effluent Guidelines Review Report*, EPA-821-R-16-002, at 2-26 (listing pollution from other industries). Leachate alone produces more toxic-weighted pound equivalents than the entire coal mining industry, according to the EPA's own records. *Id.* And EPA's brief grudgingly admits that leachate pollution "might be considered comparable" to the total amount of pollution coming from other industries such as coal mining and sugar processing. Thus, with the distortions stripped away, EPA's "argument" for its leachate regulation turns out to be a mere statement of fact, and an empty one at that. Yes, leachate pollution may form a "very small portion" of a gargantuan source of water pollution. But leachate constitutes a gargantuan source of water pollution on its own terms. Both statements are true. Neither begins to justify the agency's choice of impoundments as BAT.³⁰

*1033 At oral argument, EPA conceded that it lacked

Footnotes

- 1 Under the Act "pollutant" means "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial municipal, and agricultural waste discharged into water." 33 U.S.C. § 1362(6). "Pollution" means "the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water." *Id.* § 1362(19). "Discharge of a pollutant" means "(A) any addition of any pollutant to navigable waters from any point source, [and] (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft." *Id.*

discretion to ignore leachate based on its allegedly small size, instead arguing it *had* regulated leachate—*i.e.*, by setting BAT based on surface impoundments. Oral Argument Audio at 22:10-22:20. Thus we end where we began. The final rule itself tells us that surface impoundments have a poor record at controlling toxic water pollution. 80 Fed. Reg. 67,840. The agency's own comments tell us that "chemical precipitation is an available and demonstrated technology for the treatment of combustion residual leachate." Faced with these concessions, we must conclude that the leachate regulation rests on an impermissible interpretation of the Clean Water Act and therefore fails *Chevron* step two.³¹

V. Conclusion

In the Clean Water Act, Congress afforded EPA considerable policy-making discretion to formulate rules to mitigate pollution in our nation's waters. As a price for that delegation of authority, however, the agency must engage in "reasoned decisionmaking," *Michigan v. EPA*, 135 S.Ct. at 2706, and "stay[] within the bounds of its statutory authority." *Utility Air Reg. Grp. v. EPA*, 573 U.S. 302, 315, 134 S.Ct. 2427, 189 L.Ed.2d 372 (2014) (internal quotation marks and citations omitted). The regulations challenged in this case fall short of those judicially-enforceable limits on the exercise of agency discretion. We therefore conclude that the portions of the final rule regulating legacy wastewater and residual combustion leachate are unlawful. Accordingly, we vacate those portions of the rule and remand to the agency for reconsideration consistent with this opinion.

VACATED IN PART AND REMANDED.

All Citations

920 F.3d 999

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§ 1362(12).

- 2 See, e.g., *CMA*, 870 F.2d at 195-96 (describing the CWA's (1) grants-in-aid for publicly-owned waste-treatment works, 33 U.S.C. §§ 1281-88, 1291-92; (2) authorization to set and enforce federal effluent standards, *id.* §§ 1311, 1314; (3) requirement of state-established and federally-approved water-quality criteria, *id.* § 1313; and (4) creation of pollution permitting through the National Pollutant Discharge Elimination System (NPDES), *id.* § 1342; see also, e.g., *Tex. Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 927-29 (5th Cir. 1998) ("*Tex. Oil & Gas*") (discussing effluent limitations and NPDES permitting); *API I*, 661 F.2d at 341-42, 343-44 (discussing effluent limitations); see also generally *EPA v. Nat'l Crushed Stone Ass'n*, 449 U.S. 64, 69-70, 101 S.Ct. 295, 66 L.Ed.2d 268 (1980) (outlining basic structure of CWA).
- 3 A "point source" means "any discernible, confined and discrete conveyance ... from which pollutants are or may be discharged," but "does not include agricultural stormwater discharges and return flows from irrigated agriculture." 33 U.S.C. § 1362(14). An "effluent limitation" means "any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance." *Id.* § 1362(11).
- 4 The Act is not based solely on technological feasibility standards. It also incorporates water-quality standards into the permitting process that effectuates ELGs. See, e.g., *NRDC II*, 808 F.3d at 564-65 ("If the [ELGs] are insufficient to attain or maintain water quality standards, the CWA requires NPDES permits to include additional water quality-based effluent limits[.]" (citing 33 U.S.C. §§ 1311(b)(1)(C), 1312(a); *NRDC I*, 822 F.2d at 110)).
- 5 The complete list of BPT factors is:
- Total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application;
 - Age of equipment and facilities involved;
 - Process employed;
 - Engineering aspects of the application of various types of control techniques;
 - Process changes;
 - Non-water quality environmental impact (including energy requirements); and
 - "[S]uch other factors as the Administrator deems appropriate."
- 33 U.S.C. § 1314(b)(1)(B).
- 6 The complete list of BAT factors is:
- Age of equipment and facilities involved;
 - Process employed;
 - Engineering aspects of the application of various types of control techniques;
 - Process changes;
 - Cost of achieving such effluent reduction;
 - Non-water quality environmental impact (including energy requirements); and
 - "[S]uch other factors as the Administrator deems appropriate."
- 33 U.S.C. § 1314(b)(2)(B).
- 7 BAT and BPT standards apply to regulation of *existing* steam-powered electric plants. A standard even stricter than BAT—the "new source performance standard" ("NSPS")—applies to newly built plants. The Act defines this standard as "the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants." 33 U.S.C. § 1316(a)(1). Additional standards of varying strictness are laid out for other potential pollution sources, such as "pretreatment standards for existing sources" ("PSES"). See 33 U.S.C. § 1314(g).
- 8 The study produced a 233-page report. See *Steam Electric Power Generating Point Source Category: Final Detailed Study Report*, EPA 821-R-09-008 (Sept. 2009) ("EPA Study Report"). The report vividly describes the harms from water pollution—for instance, one dissolved metal, selenium, can kill fish and other aquatic life at "concentrations below eight parts per billion." *Id.* at 6-4.
- 9 Each stream may be briefly described as follows (see *id.* at 67,846-47):
- **FGD wastewater** is produced by systems that remove sulfur dioxide from flue gas using a "sorber slurry."
 - **Fly ash wastewater** is produced when ash in flue gas is emitted from a boiler, trapped by filters, and then sluiced from

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hoppers to a surface impoundment.

- **Bottom ash wastewater** is produced when ash falling to the furnace bottom is sluiced by water from hoppers to an impoundment or dewatering bin.
- **FGMC wastewater** is produced when carbon is injected into flue gas to facilitate removal of mercury and the resulting waste is wet sluiced with fly ash.
- **Leachate** is liquid that percolates through or drains from a landfill, or that passes through the containment structure (e.g., bottom, dikes, berms) of an impoundment.
- **Gasification wastewater** is produced by the cleaning of a synthetic gas produced by subjecting coal or coke to high temperature and pressure.

- 10 The rule addresses a seventh wastestream—"nonchemical metal cleaning wastes"—not at issue here. 80 Fed. Reg. 67,850.
- 11 "Indirect" discharges concern pollutants discharged into a "publicly owned treatment work" and are subject to distinct "pretreatment" standards. See 80 Fed. Reg. 67,841; 33 U.S.C. § 1317(b), (c).
- 12 See 33 U.S.C. § 1369(b)(1)(E) (allowing "any interested person" to file in a federal circuit court an application for review of the Administrator's "promulgating any effluent limitation" under §§ 1311 or 1314 within 120 days of the promulgation).
- 13 The Industry Petitioners are Utility Water Act Group ("UWAG"), Southwestern Electric Power Company, Union Electric Company dba Ameren Missouri, City of Springfield, Missouri, by and through the Board of Public Utilities, and Duke Energy Indiana, Inc.
- 14 The Water Company Petitioners are the American Waterworks Association and the National Association of Water Companies.
- 15 The Environmental Petitioners are Waterkeeper Alliance, Inc., the Environmental Integrity Project, and the Sierra Club.
- 16 See United States Judicial Panel on Multidistrict Litigation, Order MCP No. 136 (December 8, 2015). The cases were originally captioned as: *Waterkeeper Alliance, Inc. et al v. EPA, et al.* (2nd Cir. No. 15-3773); *Southwestern Elec. Power Co., et al. v. EPA, et al.* (5th Cir. No. 15-60821); *Union Elec. Co., et al. v. EPA, et al.* (8th Cir. No. 15-3658), and *Sierra Club v. EPA.* (9th Cir. No. 15-73578).
- 17 The agency's reconsideration of those aspects of the rule has been challenged in separate lawsuits brought by a coalition of environmental groups, including some of the petitioners in this case. That challenge was brought contemporaneously in the District of Columbia federal district court and the D.C. Circuit. The district court ruled it lacked jurisdiction, *Clean Water Action v. Pruitt*, 315 F.Supp.3d 72, 85 (D.D.C. 2018), and the D.C. Circuit transferred its case to this court, *Clean Water Action v. Pruitt*, No. 17-1216, Order (D.C. Cir. Feb. 1, 2018), where it is now pending as No. 18-60079. The Environmental Petitioners concede that the challenge to the EPA's reconsideration decision involves distinct issues that do not affect this case, and no party has asked us to postpone our decision here.
- 18 While no party contests the issue, we conclude that petitioners have associational standing to challenge the final rule on behalf of their members. See, e.g., *La. Landmarks Soc., Inc. v. City of New Orleans*, 85 F.3d 1119, 1122 n. 3 (5th Cir. 1996) (explaining that "standing is jurisdictional and, therefore, non-waivable"); *Assoc. of Am. Phys. & Surgeons v. Tex. Med. Bd.*, 627 F.3d 547, 550 (5th Cir. 2010) (associational standing present when (1) members would have standing; (2) association seeks to protect interests germane to its purpose; and (3) neither claim nor relief requires individual participation). Members of the petitioner organizations attest in declarations to cognizable injuries-in-fact traceable to the discharges at issue—such as negative impact on property and decrease in enjoyment of waterways—that could be redressed by a decision requiring reevaluation of the rule. See, e.g., *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 183, 120 S.Ct. 693, 145 L.Ed.2d 610 (2000) (sufficient injury-in-fact when plaintiffs "aver that they use the affected area and are persons for whom the aesthetic and recreational values of the area will be lessened by the challenged activity"); *Sierra Club, Lone Star Chapter v. Cedar Point Oil Co. Inc.*, 73 F.3d 546, 557 (5th Cir. 1996) (traceability established by allegations that pollutants "cause[] or contribute[] to the kinds of injuries alleged by the plaintiffs"). Finally, we find the second and third prongs of associational standing test are met here because petitioners seek to protect environmental interests germane to their purposes and individual participation by each affected member is unnecessary. *Assoc. of Am. Phys. & Surgeons*, 627 F.3d at 550.

- 19 Indeed, for treatment of gasification wastewater the inadequacies of surface impoundments appear even more pronounced. EPA found that one of the three existing U.S. plants that produce gasification wastewater previously used surface impoundments but that “the impoundment effluent repeatedly exceeded its NPDES permit effluent limitations necessary to meet applicable [Water Quality Standards].” *Id.* at 67,853.
- 20 Intervenor UWAG argues that “EPA’s acknowledgment that other technologies are better at removing *dissolved* metals does not undermine the Agency’s conclusion that surface impoundments reflect BAT for [pollutants] in legacy wastewaters.” We disagree. In this context, the EPA’s pointed criticisms of impoundments fatally undermine its BAT determination. To be sure, an agency has “some leeway reasonably to resolve uncertainty, as a policy matter, in favor of more regulation or less.” *Ctr. for Auto Safety v. Fed. Highway Admin.*, 956 F.2d 309, 316 (D.C. Cir. 1992). But there is no uncertainty in this record about the shortcomings of impoundments. EPA may have been uncertain about what the precise BAT for legacy wastewater should be, but the record fails to explain why impoundments are BAT, if that term is to have any meaning. Furthermore, if chemical precipitation or biological treatment are technically feasible but simply too costly for treating legacy wastewater, the EPA could have said so. It did not. We cannot defend the agency’s action based on a rationale the agency did not rely on. *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856.
- 21 Intervenor UWAG offers a similarly mistaken defense of the rule by arguing that the timing of wastewater generation “profoundly influence[s] the amount of wastewater, the characteristics of that wastewater, and the technologies available to treat it.” This may be true, but the question before us is not whether legacy wastewater must be regulated in the same manner as other wastewater. The question is whether impoundments are BAT for legacy wastewater, and the agency’s own words cast grave doubt on that conclusion. Additionally, UWAG’s argument that treating legacy wastewater as a “separate wastestream” was not itself arbitrary and capricious is beside the point. Our criticism is directed at the BAT determination the agency actually reached for legacy wastewater, not at the decision to establish a separate BAT in the first place.
- 22 The final rule attempts to explain away this paradox, but its rationales do not hold water. The rule asserts that, if EPA subjected non-commingled legacy wastewater to stricter controls, plants “would begin commingling other process wastewater with their legacy [non-commingled] wastewater” and thereby circumvent the regulation. *Id.* at 67,855. Perhaps or perhaps not. But the current rule *already* permits plants to do precisely what the agency is concerned about—*i.e.*, mix wastewater with non-commingled wastewater. And if EPA is seriously concerned that more commingling would result from a stricter rule, it could avoid the problem by restricting commingling at plants where it was not already an established process. Additionally, the agency contends that stricter regulation for non-commingled legacy wastewater would create the harmful “incentive” for plants to discharge the wastewater “on an accelerated schedule” that “could result in temporary increases in environmental impacts.” *Id.* But the agency fails to consider that such action would, at a minimum, require plants to seek modification of the NPDES permits. See 40 C.F.R. §§ 122.41(f)(1)(ii) (requiring permitted facilities to report any alteration in operations that “could significantly change the nature or increase the quantity of pollutants discharged”); 122.62(a)(1) (requiring modification of permits for “material and substantial alterations or additions to the permitted facility or activity (including a change or changes in the permittee’s ... disposal practice”). In any event, the central point remains: by including *non*-commingled legacy wastewater within its ambit, the final rule undercuts the key rationale supporting it—that EPA lacks sufficient data for *commingled* legacy wastewater.
- 23 EPA claims that petitioners have waived this deferral argument by failing to raise it during the notice-and-comment period. That argument is foreclosed by our precedent. See *Am. Forest & Paper Ass’n v. EPA*, 137 F.3d 291, 295 (5th Cir. 1998) (“EPA has failed to identify any provision in the CWA that suggests a party’s failure to comment waives its right to seek judicial review.”) (citing *City of Seabrook v. EPA*, 659 F.2d 1349, 1360 n.17 (5th Cir. 1981)). Our waiver precedents in this area are admittedly in conflict. See *BCCA Appeal Grp.*, 355 F.3d at 829 (acknowledging conflict); *Tex. Oil & Gas Ass’n*, 161 F.3d 923, 933 n.7 (finding waiver due to “failure to raise the objections during the notice and comment period.”). We must follow the earlier precedent, however, which directly refutes the agency’s waiver argument. When precedents conflict, “under our rule of orderliness, the earlier case controls.” *GlobeRanger Corp. v. Software AG United States of Am., Inc.*, 836 F.3d 477, 497 (5th Cir. 2016).
- 24 See, e.g., *Tex. Oil & Gas Ass’n*, 161 F.3d at 923, 934-35 (rejecting challenge based on argument that EPA only “paid lip service to the age factor [in setting BAT],” because there was still a clear “rational relationship” between the factors considered and the BAT decision); *id.* at 935-36 (rejecting another challenge based on argument that EPA relied on a flawed scientific study, because the study ultimately “had nothing to do with either the BAT determination or the actual inclusion of a zero discharge limit on produced water in the [guidelines]); *API v. EPA*, 787 F.2d at 983 (rejecting challenge based on assertion that a scientific test relied on by the EPA was “unproven and unreliable,” when evidence suggested test was reliable); *CMA*, 885 F.2d at 262 (rejecting challenge on mathematical grounds to EPA’s statistical methodology because that methodology “was within [the agency’s] broad

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discretion in the choice of statistical techniques"); *id.* at 262-63 (separately rejecting argument that EPA did not properly consider the characteristics of diluted wastestreams in its studies leading up to BAT determination).

25 For that reason we also reject petitioners' argument that EPA was required to set chemical precipitation as BAT solely because that method is technologically and economically achievable. Petitioners rely on a statement from *American Petroleum Institute v. EPA* that "the basic requirement for BAT effluent limitations is only that they be technologically and economically achievable[.]" 858 F.2d 261, 265-66 (5th Cir. 1988) ("*API II*"). As EPA explains, however, the sentence containing that phrase was deleted on rehearing. *See Am. Petroleum Inst. v. EPA*, 864 F.2d 1156, 1156 (5th Cir. 1989) (clarified on reh'g).

26 *Riverkeeper* held that a distinct CWA standard—"best technology available for minimizing environmental impact" (or "BTA"), 33 U.S.C. § 1326(b)—implicitly allows cost-benefit analysis. *See* 556 U.S. at 220, 129 S.Ct. 1498 (concluding BTA "does not unambiguously preclude cost-benefit analysis"). That decision, however, does not require finding that BAT also allows cost-benefit analysis. *Riverkeeper* focused on the specific BTA wording—"minimizing environmental impact"—which "admits of degree and is not necessarily used exclusively to refer to the 'greatest possible [pollutant] reduction.'" *Id.* at 219, 129 S.Ct. 1498. *Riverkeeper* contrasted that wording with BAT, whose "plain language ... 'require[s] the elimination of all pollutants.'" *Id.* (quoting 33 U.S.C. § 1311(b)(2)(A) (emphasis in original)). *Riverkeeper* also reasoned that other standards—like BAT—"are elucidated by statutory factor lists that guide their implementation," unlike BTA. *Id.* at 221, 129 S.Ct. 1498 (citing, *inter alia*, 33 U.S.C. § 1314(b)(2)(B)). Finally, *Riverkeeper* expressly declined to resolve whether "cost-benefit analysis is precluded under the BAT[] ... test." *Id.* at 221-22, 129 S.Ct. 1498 (stating "[i]t is not obvious to us that the ... proposition[] is correct, but we need not pursue that point"). Of course, we recognize that the BAT factors do require the agency's consideration of "the cost of achieving such effluent reduction." 33 U.S.C. § 1314(b)(2)(B).

27 EPA also argues that "BAT ... must be acceptable on the basis of numerous factors, only one of which is pollution control" (quoting *BP Expl. & Oil, Inc. v. EPA*, 66 F.3d 784, 796 (6th Cir. 1995)). That is true, but EPA has not offered any non-pollution-control factors showing impoundments are superior to chemical precipitation, let alone factors sufficient to outweigh the shortcomings of impoundments.

28 We find additional support for this conclusion in *Natural Resources Defense Council v. EPA*, 808 F.3d 556 (2nd Cir. 2015), which stands for the proposition that EPA's failure to gather data on a technological option can be arbitrary and capricious in itself. *Id.* at 573-74. There, EPA studied and regulated ballast water discharges from ships. Rather than consider onshore treatment systems for ballast water, the agency limited its consideration to *shipboard* treatment systems, foreclosing any discussion on onshore treatment. *Id.* at 573. EPA later pleaded lack of data as a justification for not adopting onshore treatment systems as BAT. *Id.* The Second Circuit rejected that argument, holding that the lack of data was "a problem of EPA's own making." *Id.* at 573-74. The decision is analogous to our case. While here we do not have evidence that EPA actively sought to suppress data collection, *cf.* 808 F.3d at 573, nonetheless EPA had both the opportunity to gather data on leachate and a strong incentive to do so—namely, the recognized problems with impoundments in controlling discharge of toxic pollutants from leachate discharges. 80 Fed. Reg. 67,840.

29 After steam-electric power plants—the most polluting industry—the remaining nine industries in the top ten for water pollution are: 2) pulp, paper, and paperboard, 3) petroleum refining, 4) nonferrous metals manufacturing, 5) fertilizer manufacturing, 6) organic chemicals, plastics, and synthetic fibers, 7) ore mining and dressing, 8) inorganic chemicals manufacturing, 9) waste combustors, and 10) textile mills. *Environmental Assessment Document* No. EPA-821-R-15-006, at 3-15.

30 Additionally, we have previously rejected arguments by EPA that a certain pollution source need not be regulated because it was allegedly small or insignificant. In *API I*, 661 F.2d at 357, the EPA declined to subject a certain subcategory of wells, "stripper gas wells," to the same control standards as other wells. The agency attempted to justify its decision by claiming stripper wells were "not a large problem" (as well as claiming it lacked data, *see supra*). *Id.* We rejected both arguments, pointing to evidence of the absolute number of stripper wells—not the pollution produced by those wells relative to the entire industry—and remarking that "[s]uch figures belie EPA's contention that there exists nothing to regulate." *Id.* The absolute number of stripper wells, not their number in proportion to the total number of oil and gas wells in the country, was what mattered. We have a similar situation here.

31 Relying on *Association of Pacific Fisheries v. EPA*, 615 F.2d 794 (9th Cir. 1980), Intervenor UWAG argues that the leachate BAT was justified by EPA's "determination not to impose extraordinary costs on the industry for *de minimis* gains." *See id.* at 818 (holding that "at some point extremely costly more refined treatment will have a *de minimis* effect on the receiving waters"). We

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disagree. EPA made no such argument for its leachate BAT, and “[w]e may not supply a reasoned basis for the agency’s action that the agency itself has not given.” *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856. In any event, as we have explained, leachate is a massive pollution source in its own right. It would be arbitrary to claim the benefits of more strictly regulating it were *de minimis*, which is likely why EPA never made such an argument.

End of Document

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Message

From: Levine, MaryEllen [levine.maryellen@epa.gov]
Sent: 4/23/2021 5:27:40 PM
To: OGC Immediate Office Support [OGCFrontOfficeSupportStaff@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]
Subject: Binder Materials for 4-27 9am OW Briefing concerning CWA Steam Electric ELGs
Attachments: Steam Briefing memo for OW.pdf; Steam Attachment 1.pdf; Steam Attachment 2.pdf; Steam Attachment 3.pdf; Steam Attachment 4.pdf

Attached please find Background materials to include in Melissa's binder for a meeting with OW Tuesday, April 27th at 9 am with Benita Best-Wong entitled "Steam Electric ELG."

My understanding is that Radhika Fox has delegated this matter to Benita Best-Wong.

- *Mary Ellen*

Mary Ellen Levine
Assistant General Counsel for Technology & Wet Weather
Water Law Office, Office of General Counsel, U.S. EPA
202 564-1345



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

Printed on MM/DD/YYYY

Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

Attachment 1:

Wastestreams Regulated in the 2020 Steam Electric Reconsideration Rule

There are dozens of wastestreams at steam electric power plants. The 2015 rule focused primarily on seven specific wastestreams listed below and presented in the figure. Six of these wastestreams are generated at coal-fired power plants and are presented in the figure below.¹ For the 2020 rule, EPA narrowed the wastestreams for which it revised limitations to flue gas desulfurization (FGD) wastewater and bottom ash transport water. In addition, the Fifth Circuit in 2019 vacated the limitations for two wastestreams: combustion residual leachate and legacy wastewater. When viewing the figure, note that coal enters the power plant at the left, and the resultant gas proceeds to the right until it is released from the stack.

¹ The exception is gasification process discharges which occur at gasification plants.

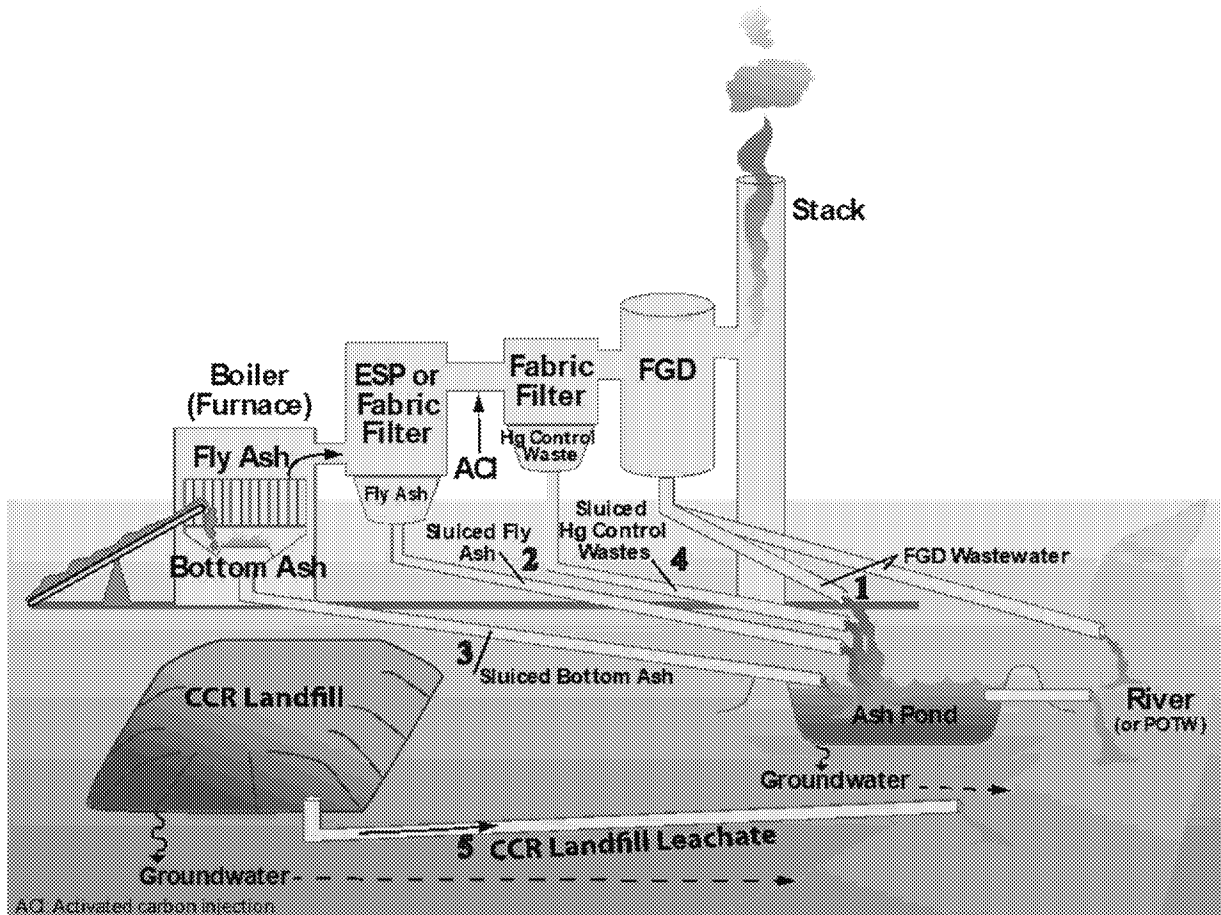


Briefing Memo – Steam Electric Reconsideration Rule; Litigation

Printed on MM/DD/YYYY

Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

Figure – Wastestreams at a Coal-Fired Power Plant Regulated in 2015



1. Flue Gas Desulphurization (FGD) wastewater – revised in 2020
2. Fly ash transport water (Sluiced Fly Ash)
3. Bottom ash transport water (Sluiced Bottom Ash) – revised in 2020
4. Mercury (Hg) control wastewater (Sluiced Hg control waste)
5. Combustion residual leachate from a coal combustion residual (CCR) landfill or surface impoundment (aka: ash pond) – vacated in 2019
6. Gasification process discharges [not pictured]
7. Legacy wastewaters (i.e., any of the above wastewaters generated before the implementation dates for the new, more stringent ELGs) – vacated in 2019

Case Name	Challenged Action	Docket #	NGO Attorney & contact info
<i>Various CWA 401 rule challenges</i>	CWA Section 401 Certification Rule, which restricts the ability of states to enforce state law through Section 401	D.S.C. 2:20-cv-03062-DCN, N.D. Cal., No. 20-cv-06137-WHA	Leslie Griffith (SELC), Jon Devine (NRDC), Moneen Nasmith (Earthjustice)
<i>NRDC v. EPA</i>	EPA Denial of Petition to Cancel Uses of TCVP	9th Cir. 20-72794	Pete DeMarco, Ian Fein, NRDC
<i>Natural Resources Defense Council v. Wheeler</i>	Rescission of EPA's 2016 extension of leak detection and repair rules for refrigeration equipment	D.C. Cir. 20-1150, 20-1151	Sara Tallman, NRDC
<i>Clean Water Action, et al. v. Wheeler</i>	2020 Steam Electric Reconsideration rule (Effluent Limitation Guidelines)	4th Cir., Case No. 20-2244 (20-2817(L))	Thom Cmar, Earthjustice
<i>Various CWA jurisdictional rule challenges</i>	WOTUS "Repeal Rule" and new definition of "Waters of the United States"	Various	Mark Sabath, Geoff Gisler (SELC), Jon Devine, Jolie McLaughlin (NRDC)
<i>Neighbors For Environmental Justice v. EPA</i>	Final 2020 TSCA risk determination for methylene chloride	9th Cir., No. 20-72091; consolidated with 20-73276	Selena Kyle, NRDC; Jonathan Kalmuss-Katz, Earthjustice
<i>Sierra Club v. EPA</i>	Revocation of Obama SSM SIP Call in Texas, North Carolina and Iowa:	D.C. Cir. Nos. 20-1115 (Texas), 20-1229 (North Carolina), 21-1022 (Iowa)	Andrea Issod, Sierra Club; Seth Johnson, Earthjustice; Patton Dycus, EIP; John Walke & Emily Davis, NRDC; Leslie Griffith,
<i>Citizens for Pennsylvania's Future v. EPA</i>	Exemption for power plants that burn coal refuse from meeting acid gas standards applicable to other power plants.	DC Cir. 20-1207	Jim Pew, Earthjustice
<i>Downwinders at Risk v. EPA</i>	Rollback of ozone protections in Houston & Dallas	5th Cir. 18-60290	Seth Johnson, Earthjustice

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 5/19/2021 4:33:43 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Levine, MaryEllen [levine.maryellen@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Patrick, Monique [Patrick.Monique@epa.gov]
Subject: Steam electric meeting with petitioners before 5/25
Attachments: Steam Follow-Up Analysis Memo 20210514.docx; Consolidated Applachian Voices Notes (002).docx

Melissa,

We are working on scheduling a meeting with environmental petitioners in the steam electric reconsideration rule litigation for you and Benita, hopefully to take place before **next Tuesday, May 19**, when our current litigation abeyance expires. We thought you were free on Friday afternoon at 4:30 for such a meeting, but learned just now from Monique that you are not free at all on Friday, so we are trying to reschedule for Monday. In the meantime, we are drafting a declaration to support the need for 60 more days on the abeyance if petitioners decide to oppose our request.

We are also working with Monique to schedule a follow-up briefing for you and Benita on the information OW sent forward last week before the meeting with petitioners. I will send both the OW materials and summary notes from the last meeting between environmental petitioners and OW staff to the Front Office for inclusion in your evening binder (they're attached here as well).

Please let me know if you need anything else or would like to meet with us before the meeting with petitioners.

Jessica Hall Zomer

Office of General Counsel
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**Consolidated notes from March 11, 2021, meeting with Environmental Petitioners in
Appalachian Voices v. EPA, No. 20-2187 (4th Cir.)**

Summary/Talking Points:

- Environmental petitioners requested a meeting to discuss EPA's review of the 2020 Steam Electric Reconsideration Rule
- EPA and environmental petitioners had a frank and open discussion focused on
 - o new information environmental petitioners plan to submit to EPA
 - o petitioners' views on how to move forward with review of the 2020 rule
- EPA asked petitioners to send any new information and data they have as soon as possible.
- Specific views of and requests from the Petitioners are described below, and we are in the process of reviewing and considering them at the staff level.
- EPA agreed to schedule small follow-up meetings as appropriate once we have reviewed their information.
- Petitioners made passing reference to a petition for reconsideration of the 2020 rule, but did not explicitly state that they intend to submit a petition to the Agency.

Environmental Petitioner Participants:

Thom Cmar, Earthjustice

Lisa Perfetto, Earthjustice

Mychal Ozaeta, Earthjustice

Lauren Piette, Earthjustice

Abel Russ, Environmental Integrity Project

Hannah Connor, Center for Biological Diversity (CBD)

Brett Hartl, CBD

Dan Estrin, Waterkeeper

John Devine, Natural Resources Defense Council (NRDC)

Rachel Rothschild, NYU Institute of Policy Integrity

Bethany Noll, NYU Institute of Policy Integrity

Amanda Garcia, Southern Environmental Law Center (SELC)

Frank Holleman, SELC

Leslie Griffith, SELC

Jennifer Peters, Clean Water Action

Casey Roberts, Sierra Club

Julian Gonzales, Earthjustice

Overview of Petitioners' comments: petitioners still stand behind public comments on 2020 rule; the rule should never have been issued; excited to work with EPA/new leadership; hope to avoid having to litigate the 2020 rule; hope for additional dialogue/meetings with EPA.

Issues raised by Petitioners:

- EPA should complete review of the 2020 rule as soon as defensibly possible; the record already supports zero discharge for both flue gas desulfurization (FGD) wastewater and bottom ash transport water. A new rule should contain aggressive compliance deadlines.
- Revise the rule to eliminate FGD wastewater discharges based on the existing record.
 - EPA should visit Plant Scherer to see installation of membrane filtration system and verify that it is not a pilot system but a full-scale system.
 - Revert to the 2015 rule in the interim.
 - EPA has an obligation to eliminate the discharge of FGD wastewater/membranes are BAT
 - BAT can be based on pilots/foreign plants; that should be enough here. But, also there is full scale application at Plant Scherer.
 - Fly ash availability is not a reason against membranes; there is a surplus of fly ash.
 - Application of membranes to other wastestreams is not relevant because those wastestreams are more challenging.
 - Idea that we can't rely on foreign plants is inappropriate especially as the vendors are U.S.-based. U.S. coals plants are not different from Chinese coal plants.
 - Timeline for membranes is nowhere near 8 years; can be done in as little as 6 months. Record already supports this outcome, it should not take a long time for EPA to make this decision.
- Revert to the 2015 rule limits (zero discharge) for Bottom Ash based on the existing record
 - Industry reports show that purge is not necessary. Purge was based on "worst" plants. No new information is required to make a decision on zero discharge.
- Revisit benefits analysis
 - Quantified benefits: EPA should quantify bromide benefits as it did in the 2019 proposal; EPA should not be using the Trump administration's social cost of carbon number.
 - Unquantified benefits: EPA should consider additional categories of unquantified benefits related to ESA, health effects, children's health effects
- While EPA is doing a new rulemaking, EPA should issue a memo instructing permit authorities to include reopener clauses in all permits (within 45 days of a new rule), in light of a new reconsideration. EPA should object to permits that don't include this. They don't generally support administratively continuing overdue permits.
- Immediately vacate the high flow subcategory, which they claim accounts for 1/6 of all FGD discharges nationally.

- They view this subcategory as unlawful because it is based on cost alone. They said we have choices: we could concede error on this part of the litigation or we can discreetly address this subcategory in a phase 1 rulemaking.
- Issue guidance regarding interpretation of the regulations regarding transfer between limits for plants in the low utilization and retirement subcategories
 - They said without clarification there seems to be a loophole in the regulations; they said every permit should have the generally applicable limits already in them, which would become immediately applicable if the subcategory requirements are no longer met.
 - A plant's Notice of Planned Participation should be publicly available.
- Revise Environmental Justice analysis (The 2020 rule had disproportionate impacts on EJ communities).
- Failure to consult with Services under the Endangered Species Act on this rule was a legal error; consultation should start as early as possible on this rule.
- Most of the discussions presented were high level concepts.
 - Petitioners will be providing additional information for us to review, as well as more detailed suggestions for several discrete smaller regulatory actions to take in the short term.
 - We committed to meeting with them again after they provide the studies and suggested regulatory activities.

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 5/20/2021 12:52:33 AM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: For 2pm meeting Thursday: Steam Electric FGD Follow-up Analysis
Attachments: Steam Follow-Up Analysis Memo 20210514.docx

Melissa,

A meeting was scheduled late in the day today for 2pm tomorrow (Thursday) to follow up with you and Benita on some outstanding FGD wastewater issues. I apologize that I didn't have time to get this document into your binder for tonight, but wanted to resend it so you have it for the meeting.

Jessica

Begin forwarded message:

From: "Neugeboren, Steven" <Neugeboren.Steven@epa.gov>
Date: May 14, 2021 at 9:51:25 PM EDT
To: "Hoffer, Melissa" <Hoffer.Melissa@epa.gov>
Cc: "Levine, MaryEllen" <levine.maryellen@epa.gov>, "Zomer, Jessica" <Zomer.Jessica@epa.gov>
Subject: Fwd: FOR YOUR REVIEW: Steam FGD Follow-up Analysis

Melissa - attached is analysis prepared to address the issues you and Benita raised at the last meeting. OST is setting up a follow up a meeting with you and Benita to discuss.
Let us know if you have any questions

Steve.

Steven Neugeboren
Associate General Counsel for Water
Environmental Protection Agency
Mails code 2355A
1200 Pennsylvania Ave, NW
Washington DC 20460
202-564-5488

Begin forwarded message:

From: "Nagle, Deborah" <Nagle.Deborah@epa.gov>
Date: May 14, 2021 at 6:20:29 PM EDT
To: "Best-Wong, Benita" <Best-Wong.Benita@epa.gov>, "Neugeboren, Steven" <Neugeboren.Steven@epa.gov>
Cc: "Wood, Robert" <Wood.Robert@epa.gov>, "Scozzafava, MichaelE" <Scozzafava.MichaelE@epa.gov>, "Damico, Brian" <Damico.Brian@epa.gov>, "Levine, MaryEllen" <levine.maryellen@epa.gov>
Subject: FOR YOUR REVIEW: Steam FGD Follow-up Analysis

Benita- Attached is the data analysis that OST staff conducted to evaluate the pollutant loadings from facilities with FGD discharges under multiple policy scenarios. We have submitted a meeting request for next week 17-21 MAY to meet with you and Melissa to answer any questions about the analysis. Underlying data are included in the appendix.

I think the team did an exceptional job in a short period of time pulling this data analysis together and articulating the results. I hope you find the data analysis helpful for making a decision on how to proceed.

Steve – as per our conversation please share the attached data analysis with Melissa.

-Deborah

Deborah G. Nagle, Director
Office of Science and Technology
1200 Pennsylvania Ave, NW
Washington, DC 20460
Tel: (202) 564-1185

Message

From: Levine, MaryEllen [levine.maryellen@epa.gov]
Sent: 5/21/2021 3:26:11 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: Automatic reply: Steam Electric Reconsideration Rule

I am out of the office during the morning Friday, May 20th, returning in the afternoon.

Message

From: Neugeboren, Steven [Neugeboren.Steven@epa.gov]
Sent: 5/21/2021 3:26:11 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: Automatic reply: Steam Electric Reconsideration Rule

I'm off duty Friday May 21. If you need assistance while I'm out please contact Dawn Messier at messier.dawn@epa.gov.

Message

From: Brett Hartl [BHartl@biologicaldiversity.org]
Sent: 5/21/2021 3:26:15 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: Automatic reply: Steam Electric Reconsideration Rule

Hello,

I am out of the office May 17-21 in Yellowstone National Park.

For press inquiries, please contact Patrick Sullivan: psullivan@biologicaldiversity.org

For endangered species issues, please contact Stephanie Kurose:
skurose@biologicaldiversity.org

For public lands and energy issues, please contact Paulo Lopes:
plopes@biologicaldiversity.org

Thanks,

Brett Hartl
Government Affairs Director
Center for Biological Diversity
202-817-8121

Message

From: Lisa Perfetto [lperfetto@earthjustice.org]
Sent: 5/21/2021 3:26:32 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: Automatic reply: Steam Electric Reconsideration Rule

Thank you for your message. I am out of the office and may be slow to respond to email.

Lisa K. Perfetto
Staff Attorney
Earthjustice
48 Wall Street, 15th Floor
New York, NY 10005
T: 212.845.7388
F: 212.918.1556
earthjustice.org

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*please consider the environment before printing

Message

From: Hannah Connor [HConnor@biologicaldiversity.org]
Sent: 5/21/2021 3:26:17 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: Automatic reply: Steam Electric Reconsideration Rule

Thank you for your message. I am out of the office until Monday, May 24. If your matter is urgent or time-sensitive, please give me a call at (202) 681-1676. For all other matters, I will respond to your message when I return.

Thank you for your patience,
Hannah

Appointment

From: Jennifer Peters [jpeters@cleanwater.org]
Sent: 5/21/2021 3:27:01 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: [Invitation Reply] Steam Electric Reconsideration Rule
Attachments: invite.ics
Location: Microsoft Teams Meeting
Start: 5/24/2021 2:30:00 PM
End: 5/24/2021 3:30:00 PM
Show Time As: Busy

Recurrence: (none)

Invitation response from jpeters@cleanwater.org...

✓ Accepted

Subject: Steam Electric Reconsideration Rule
Location: Microsoft Teams Meeting
Date: Monday, May 24, 2021
Time: 10:30 am - 11:30 am (US/Eastern)
From: Hoffer, Melissa
Attendees: jpeters@cleanwater.org

Appointment

From: jpeters@cleanwater.org [jpeters@cleanwater.org]
To: Hoffer\, Melissa [hoffer.melissa@epa.gov]; jpeters@cleanwater.org

Subject: Steam Electric Reconsideration Rule
Location: Microsoft Teams Meeting

Start: 5/24/2021 2:30:00 PM
End: 5/24/2021 3:30:00 PM
Show Time As: Busy

Recurrence: (none)

Message

From: Patrick, Monique [Patrick.Monique@epa.gov]
Sent: 6/23/2021 9:41:06 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: Evening Binder for 6/24/21
Attachments: Evening Binder 6.24.21.pdf

Good afternoon Melissa,

You may have to save it first, if you have issues opening it directly from my email.

1. Daily Check-in w/Administrator Regan 8:30-9 am – No attachments received.
2. CCR Briefing for AO Staff w/Alison Cassady 9-10 am (Conflicts w/Daily DGCs' Check-in) – No attachments received.
3. Daily Check-in w/DGCs 9:15-9:30 am – No attachments received.
4. Wkly w/Goffman 10-10:20 am – No attachments received.
5. Steam Electric 2020 Rule Decision for Reconsideration w/OW 10:30-11 am – Attachments 1-4
6. OGC Senior Staff Mtg 11:30 am – 12:15 pm – No attachments received.
7. OGC LLM On Clean Water Act Section 401 Certification Rule Presented by WLO (CY2021-5) 12-1 pm (Conflicts w/OGC Senior Staff Mtg and WOTUS Mtg w/Administrator Regan) – Attachments will be added at the end of binder.
8. Waters of the United States w/Administrator Regan 12:30-1:15 pm – No attachments received.
9. Monthly with OCSPP, ORD, OGC, OLEM, OW, OMS, OECA, OAR and OP w/Administrator Regan 1:30-2:30 pm – No attachments received.
10. Discussion w/Utech 2:30-2 pm – No attachments received.
11. Discussion w/Region 1 3-3:30 pm – No attachments received.
12. CCR w/Dimple & SWERLO 3:30-3:55 pm – No attachments received.
13. CAELP Power Sector Modeling 4-5:30 pm – No attachments received.

FYI – For Lunch & Learn at noon tomorrow – Attachments 5-8

FYI Draft Paper on EPA Legal Authorities for Possible Global Agreement on Marine Plastics Pollution (Due to State Dept. by COB Friday 6/25) – Attachments 9 & 10

FYI - Draft Restoration Rule materials for your review – Attachments 11-13

FYI – How to use work phone – Attachments 14-16

Thank you,

Monique S. Patrick

Program Specialist

Notary Public

OGC/IO

Main #564-8064

Direct #564-5534

Room #4020C WJC

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 7/13/2021 2:53:28 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; OGC Immediate Office Support [OGCFrontOfficeSupportStaff@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Shaw, Carla [Shaw.Carla@epa.gov]
Subject: Binder Materials for 7-14-21 2:30 pm briefing on Steam Electric Litigation with Melissa
Attachments: Briefing Paper for 7.14.21 mtg wtih Melissa on Steam Electric.pdf

Melissa,

Attached is a two-page paper that we will use for discussion of the steam electric litigation with you tomorrow, **Wednesday, at 2:30 pm.**

Please let me know if you have any question or want any additional information. Looking forward to our discussion tomorrow,

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 7/21/2021 3:20:27 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: RE: Follow-up on my voice-mail re help for OW on economics analysis
Attachments: Draft Steam Declaration 7.19.21.docx; Draft Steam NOI FRN 20210721.docx

Melissa,

Attached are drafts of a declaration to file next Monday, July 26, to support our request for an abeyance (DOJ is drafting the request now), as well as a draft FRN that OW prepared and we have reviewed. These drafts were just sent to Radhika by Deborah Nagle. We wanted to make sure you had them as well, in advance of our discussion this afternoon. One note about the declaration: I have not added a paragraph yet that mentions that FRN, as we discussed yesterday, but I can do so easily if it looks like the FRN will be signed after Monday and Radhika is okay with it.

Please let me know if you have any questions.

Jessica

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Sent: Wednesday, July 21, 2021 10:48 AM
To: Neugeboren, Steven <Neugeboren.Steven@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>
Subject: RE: Follow-up on my voice-mail re help for OW on economics analysis

I am going to relay to Radhika in 2 mins.

From: Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Sent: Wednesday, July 21, 2021 10:30 AM
To: Hoffer, Melissa <Hoffer.Melissa@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>
Subject: RE: Follow-up on my voice-mail re help for OW on economics analysis

Thanks! Can't say I understand how all this works but this sounds very helpful/promising. Assume you'll discuss this on today's call? We could also forward this to OST but maybe best to hear it from you to contextualize it?

Steven Neugeboren
Associate General Counsel for Water
United States Environmental Protection Agency
Mailcode 2355A
1200 Penn. Ave., N.W.
Washington DC 20460
(202) 564-5488

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Sent: Wednesday, July 21, 2021 10:20 AM
To: Neugeboren, Steven <Neugeboren.Steven@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>; Zomer,

Jessica <Zomer.Jessica@epa.gov>

Subject: FW: Follow-up on my voice-mail re help for OW on economics analysis

Looks like OAR can access the 2020 EGU revenue numbers. Kevin will set up a call with OW.

From: Hoffer, Melissa

Sent: Wednesday, July 21, 2021 10:18 AM

To: Culligan, Kevin <Culligan.Kevin@epa.gov>

Subject: Re: Follow-up on my voice-mail re help for OW on economics analysis

Excellent. Thank you. For OW, I think Debra Nagle and Benita Best-Wong are key, and they will know who else should be included. I defer to you on who to loop in from OP and thanks for suggesting it. Please include me, Mary Ellen Levine, and Jessica Zomer (from the Water Law Office). Thank you.

Sent from my iPhone

On Jul 21, 2021, at 10:09 AM, Culligan, Kevin <Culligan.Kevin@epa.gov> wrote:

Yes. OAR (and presumably OW) regularly use this type of information when we do SBREFA analysis. I would be more than happy to get a call set up with the relevant folks at O and OAR. I would also highly recommend that OP be included as they have expertise, equities and likely more bandwidth to help OW if this requires more than a phone call to talk about how we typically collect this data, OP would be in a much better position to provide additional assistance to OP on analysis.

- Kevin

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>

Sent: Wednesday, July 21, 2021 10:05 AM

To: Culligan, Kevin <Culligan.Kevin@epa.gov>

Subject: RE: Follow-up on my voice-mail re help for OW on economics analysis

That is great, thank you. So just to confirm, OAR is able to access 2020 revenue numbers for EGUs?

From: Culligan, Kevin <Culligan.Kevin@epa.gov>

Sent: Wednesday, July 21, 2021 9:19 AM

To: Hoffer, Melissa <Hoffer.Melissa@epa.gov>

Subject: Follow-up on my voice-mail re help for OW on economics analysis

Have a few folks from OAQPS and OP to talk with OW (I think it was OW and not OLEM), on the Dun Bradstreet economic analysis questions you mentioned yesterday. We can definitely help. Who should we be working with in OW (is that Richard Benware?). Feel free to call me if it makes sense to talk more about this before I pull the trigger on getting folks together to talk.

Kevin (202)222-5351

Message

From: Fox, Radhika [Fox.Radhika@epa.gov]
Sent: 7/21/2021 6:33:36 PM
To: Risley, David [Risley.David@epa.gov]; Conger, Nick [Conger.Nick@epa.gov]
CC: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: 7.21.2021 - Steam Electric Comms Plan.docx
Attachments: 7.21.2021 - Steam Electric Comms Plan.docx

Hi Nick: per our conversation, here is the draft press release.

David: I spoke to Nick briefly and gave him a heads up on this. I will also see if I can set something up with Radha, Casey, Rosemary on this for tomorrow morning. Here are my edits and comments on the press release.

Melissa: as someone close to this issue, do you feel like it's hardhitting enough on our intent to do a new rulemaking without going to far?

David: do you want to share this version with the OST/OGC team we are meeting with at 4?

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 7/22/2021 3:01:26 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]
CC: Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: For review - Steam Electric - Draft Motion for Abeyance
Attachments: ENV_DEFENSE-#966796-v1-Steam_motion_for_long-term_abeyance_pending_reconsideration_jhz.docx; Draft Steam Declaration 7.19.21.docx

Melissa/Steve,

In the interest of time, I'm sending this 5-page draft motion for abeyance to you both for review simultaneously. Mary Ellen and I have reviewed and made some edits to DOJ's draft, which you will see in red-line. I am also including the most up to date version of the declaration to aid your review.

We still have not heard back from petitioners but I will let you know when we do.

Thanks,

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 7/22/2021 5:18:22 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Draft FRN for Steam Electric - OGC concurrence needed
Attachments: Draft Steam NOI FRN 20210722_jhz.docx

Melissa,

OW intends to sign the steam electric FRN tomorrow, and they need OGC concurrence to proceed. It is fine for you to either concur or give me authorization to concur. The current draft is attached with a few edits from me. Since it's still undergoing some review in OW, I will certainly let you know if any substantial changes are made to it following our concurrence.

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 7/26/2021 2:34:03 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: FW: Signed - Steam Electric declaration
Attachments: R.Fox_Steam Declaration 7.26.21.pdf

Importance: High

Tsuki,

Here's the signed declaration.

Thanks!
Jessica

From: Aguirre, Janita <Aguirre.Janita@epa.gov>
Sent: Monday, July 26, 2021 9:14 AM
To: Weyer, Erica <weyer.eric@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>
Cc: Braschayko, Kelley <braschayko.kelley@epa.gov>
Subject: Signed - Steam Electric declaration and FRN
Importance: High

Hi Erica and Jessica,

Sending this to just you two since this is time-sensitive. Please see the attached FRN and Declaration for steam – both are signed. Can you share this internally as needed, and submit the FRN via EAMS? If you need anything else, please let me know.

Thank you,
Janita

Janita Aguirre – Chief of Staff
U.S. Environmental Protection Agency | Office of Water
Phone: (202) 566-1149 | Email: aguirre.janita@epa.gov

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 7/22/2021 2:44:02 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
CC: Conger, Nick [Conger.Nick@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]
Subject: RE: 7.21.2021 - Steam Electric Comms Plan v2.docx
Attachments: 7.21.2021 - Steam Electric Comms Plan v2.docx

I tried to rework the paragraph that Melissa flagged to be clearer on what is in effect. What do others think?

Jessica

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Sent: Thursday, July 22, 2021 9:53 AM
To: Zomer, Jessica <Zomer.Jessica@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>
Cc: Conger, Nick <Conger.Nick@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Subject: 7.21.2021 - Steam Electric Comms Plan v2.docx

Jessica / Mary Ellen,

I think this looks very good—flagging a section where I think we need to clarify what currently is in effect + what will remain in effect during the pendency of our review.

M

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 4/13/2021 8:02:45 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Payne, James (Jim) [payne.james@epa.gov]; OGC Immediate Office Support [OGCFrontOfficeSupportStaff@epa.gov]; Patrick, Monique [Patrick.Monique@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Binder Materials for 4-16 1pm briefing on Steam Electric with Melissa
Attachments: Briefing Paper for 4-16 1pm mtg with Melissa on Steam Electric (1 of 2).pdf; Briefing Materials for 4-16 1pm mtg with Melissa on Steam Electric (2 of 2).pdf

Attached are some briefing materials for Melissa's binder for tonight, which we gave her a heads up would be coming today.

Thanks!

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

920 F.3d 999

United States Court of Appeals, Fifth Circuit.

SOUTHWESTERN ELECTRIC POWER
COMPANY; Utility Water Act Group;
Union Electric Company, doing business
as Ameren Missouri; Waterkeeper
Alliance, Incorporated; Environmental
Integrity Project; Sierra Club; American
Water Works Association; National
Association of Water Companies; City of
Springfield, Missouri, by and through the
Board of Public Utilities; Duke Energy
Indiana, Incorporated, Petitioners

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY; Andrew
Wheeler, in his official capacity as Acting
Administrator of the United States
Environmental Protection Agency,
Respondents

No. 15-60821

FILED April 12, 2019

Synopsis

Background: Environmental organizations filed petitions under Clean Water Act (CWA) challenging United States Environmental Protection Agency's (EPA) final rule updating effluent limitation guidelines for steam-electric power plants. Petitions were consolidated and transferred by Judicial Panel on Multidistrict Litigation.

Holdings: The Court of Appeals, Stuart Kyle Duncan, Circuit Judge, held that:

[1] EPA acted arbitrarily and capriciously by setting best available technology economically achievable (BAT) limit for legacy wastewater equal to outdated best practicable control technology currently available (BPT) standard of surface impoundments;

[2] organizations did not waive argument that EPA acted arbitrarily and capriciously in promulgating effluent limitation;

[3] CWA required EPA to reflect performance of single best-performing plant in field in setting BAT standard for combustion residual leachate;

[4] EPA could not take into account relatively small amount of pollutants discharged in leachate or stricter BATs set for larger industry wastestreams as justification for defaulting to BPT standard of impoundments set 36 years earlier;

[5] BAT limit for leachate rested on impermissible interpretation of CWA; and

[6] EPA's decision not to update BAT limit for leachate was unreasonable.

Vacated in part and remanded.

West Headnotes (21)

- [1] **Administrative Law and Procedure**—Wisdom, judgment, or opinion in general
Administrative Law and Procedure—Scientific and technical matters

Under Administrative Procedure Act's highly deferential standard of review, court is not empowered to substitute its judgment for agency's, particularly where agency's decision turns on its evaluation of complex scientific data within its technical expertise. 5 U.S.C.A. § 706(2)(A).

4 Cases that cite this headnote

- [2] **Administrative Law and Procedure**—Review for arbitrary, capricious, unreasonable, or illegal actions in general

If agency's reasons and policy choices conform to minimal standards of rationality, then its actions are reasonable and must be upheld by

court. 5 U.S.C.A. § 706(2)(A).

1 Cases that cite this headnote

[3] **Environmental Law**—Water pollution

Environmental Protection Agency's (EPA) choice of analytical methodology in setting and enforcing standards governing pollutant discharges from point sources under Clean Water Act (CWA) is entitled to presumption of regularity, leaving challengers with considerable burden to carry. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b).

[4] **Administrative Law and Procedure**—Review for arbitrary, capricious, unreasonable, or illegal actions in general

Court must set aside agency action if agency entirely failed to consider important aspect of problem, offered explanation for its decision that runs counter to evidence before agency, or is so implausible that it could not be ascribed to difference in view or product of agency expertise. 5 U.S.C.A. § 706(2)(A).

3 Cases that cite this headnote

[5] **Administrative Law and Procedure**—Review for arbitrary, capricious, unreasonable, or illegal actions in general

In reviewing agency action under Administrative Procedure Act (APA), court must ensure that agency examined relevant data and articulated satisfactory explanation for its action and assess whether agency's decision was based on consideration of relevant factors. 5 U.S.C.A. § 706(2)(A).

4 Cases that cite this headnote

[6] **Administrative Law and Procedure**—Plain, literal, or clear meaning; ambiguity or silence

If Congress has directly spoken on issue, court, as well as agency, must give effect to unambiguously expressed intent of Congress.

2 Cases that cite this headnote

[7] **Administrative Law and Procedure**—Plain, literal, or clear meaning; ambiguity or silence
Administrative Law and Procedure—Permissible or reasonable construction

If statutory text is ambiguous and agency's construction of statute is permissible, it should be upheld.

4 Cases that cite this headnote

[8] **Environmental Law**—Particular limitations and guidelines

Environmental Protection Agency (EPA) acted arbitrarily and capriciously in promulgating effluent limitation guidelines for steam-electric power plants by setting best available technology economically achievable (BAT) limit for legacy wastewater equal to outdated best practicable control technology currently available (BPT) standard of surface impoundments, where EPA's final rule described impoundments as outdated and ineffective pollution control technology and indicated that other available and affordable technologies were far better than impoundments at removing pollutants from various streams that comprised legacy wastewater, rule said nothing to indicate that choice of impoundments as BAT for legacy wastewater was based on performance of single best-performing plant in field, and EPA failed to allow BAT

determinations to be made by each facility's permitting authority on site-specific basis. Federal Water Pollution Control Act §§ 301, 304, 33 U.S.C.A. §§ 1311(b)(2), 1314(b)(2).

[9] **Environmental Law**—Preservation of error in administrative proceeding

Environmental organizations did not waive argument that Environmental Protection Agency (EPA) acted arbitrarily and capriciously in promulgating effluent limitation guidelines for steam-electric power plants when it deferred setting nationwide effluent guideline for legacy wastewater by failing to raise it during notice-and-comment period for final rule. Federal Water Pollution Control Act § 101 et seq., 33 U.S.C.A. § 1251 et seq.

[10] **Statutes**—Construing together; harmony

In construing statute, court must read words in their context, interpreting statute as symmetrical and coherent regulatory scheme, and fitting, if possible, all of statute's parts into harmonious whole.

1 Cases that cite this headnote

[11] **Administrative Law and Procedure**—Plain, literal, or clear meaning; ambiguity or silence

In determining whether Congress has specifically addressed question at issue, for purposes of reviewing administrative agency's construction of statute that it administers, court must be guided to degree by common sense as to manner in which Congress is likely to delegate policy decision of such economic and political magnitude to administrative agency.

1 Cases that cite this headnote

[12] **Environmental Law**—Technology-based limits

In setting best available technology economically achievable (BAT) standard for combustion residual leachate in final rule on effluent limitation guidelines for steam-electric power plants, Clean Water Act (CWA) required Environmental Protection Agency (EPA) to reflect performance of single best-performing plant in field, rather than average of best performance levels of existing plants. Federal Water Pollution Control Act §§ 301, 304, 33 U.S.C.A. §§ 1311(b)(1)(A), 1311(b)(2)(A), 1314(b)(1)(A), 1314(b)(1)(B), 1314(b)(2)(B).

[13] **Environmental Law**—Particular limitations and guidelines

In setting best available technology economically achievable (BAT) standard for combustion residual leachate in final rule on effluent limitation guidelines for steam-electric power plants, Environmental Protection Agency (EPA) could not take into account relatively small amount of pollutants discharged in leachate or stricter BATs set for larger industry wastestreams as justification for defaulting to best practicable control technology currently available (BPT) standard of impoundments set 36 years earlier. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b)(2)(B).

[14] **Environmental Law**—Construction

Courts must interpret Clean Water Act (CWA) by looking at statute's full text, rather than one isolated clause, along with statute's structure and its public safety purpose. Federal Water Pollution Control Act § 101 et seq., 33 U.S.C.A. § 1251 et seq.

1 Cases that cite this headnote

- [15] **Administrative Law and Procedure**—Plain, literal, or clear meaning; ambiguity or silence
Administrative Law and Procedure—Permissible or reasonable construction

In determining whether agency's interpretation of ambiguous statute is entitled to *Chevron* deference, court must ask only whether agency's answer is based on permissible construction of statute.

1 Cases that cite this headnote

- [16] **Administrative Law and Procedure**—Plain, literal, or clear meaning; ambiguity or silence
Administrative Law and Procedure—Permissible or reasonable construction

Under *Chevron*, agency's interpretation of ambiguous statute governs if it is reasonable interpretation of statute—not necessarily only possible interpretation, nor even interpretation deemed most reasonable by courts.

- [17] **Administrative Law and Procedure**—Plain, literal, or clear meaning; ambiguity or silence
Administrative Law and Procedure—Erroneous or unreasonable construction; conflict with statute

Agency interpretation of ambiguous statute is not entitled to *Chevron* deference if it is contrary to clear congressional intent or frustrates policy Congress sought to implement.

- [18] **Environmental Law**—Water pollution

Provision of Environmental Protection Agency's (EPA) final rule updating effluent limitation guidelines for steam-electric power plants setting best available technology economically achievable (BAT) limit for combustion residual leachate as surface impoundments rested on impermissible interpretation of Clean Water Act (CWA), and thus was not entitled to *Chevron* deference, where final rule categorically recognized that impoundments were ineffective at removing toxic pollutants from wastewater, rule unreasonably declined to set as BAT available technologies that were admittedly more effective at controlling leachate discharges, and EPA admitted during notice-and-comment that chemical precipitation was available and demonstrated technology for treatment of combustion residual leachate, based on its use in treating similar wastestream. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b)(2)(B).

- [19] **Environmental Law**—Substances, Sources, and Activities Regulated

Lack of data is not valid excuse for agency's failure to regulate activity pursuant to Clean Water Act (CWA) that concededly creates pollution. Federal Water Pollution Control Act § 101 et seq., 33 U.S.C.A. § 1251 et seq.

1 Cases that cite this headnote

- [20] **Environmental Law**—Technology-based limits

Technological process can be deemed "available" for purposes of setting best available technology economically achievable (BAT) standard under Clean Water Act (CWA), even if it is not in use at all, or if it is used in unrelated industries. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b)(2)(B).

- [21] **Environmental Law**—Particular limitations and guidelines
Environmental Law—Water pollution

Environmental Protection Agency's (EPA) decision not to update best available technology economically achievable (BAT) limit for combustion residual leachate in promulgating final rule updating effluent limitation guidelines for steam-electric power plants on ground that leachate pollution constituted very small portion of pollutants discharged collectively by all steam power plants was unreasonable interpretation of Clean Water Act (CWA), and thus was not entitled to *Chevron* deference, where, if leachate were separate industry, it would rank as 18th-largest source of water pollution in United States. Federal Water Pollution Control Act § 304, 33 U.S.C.A. § 1314(b)(2)(B).

***1002** On Petitions for Review of Final Administrative Actions of the United States Environmental Protection Agency

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Before HAYNES, HO, and DUNCAN, Circuit Judges.

Opinion

STUART KYLE DUNCAN, Circuit Judge:

***1003** Steam-electric power plants generate most of the electricity used in our nation and, sadly, an unhealthy share of the pollution discharged into our nation's waters. To control this pollution, the Clean Water Act, 33 U.S.C. § 1251 *et seq.*, empowers the Environmental Protection Agency to promulgate and enforce rules known as "effluent limitation guidelines" or "ELGs." *Id.* §§ 1311, 1314, 1362(11). For quite some time, ELGs for steam-electric power plants have been, in EPA's words, "out of date." 80 Fed. Reg. 67,838. That is a charitable understatement. The last time these guidelines were updated was during the second year of President Reagan's first term, the same year that saw the release of the first CD player, the Sony Watchman pocket television, and the Commodore 64 home computer. In other words, 1982. *See id.* (noting ELGs were "promulgated and revised in 1974, 1977, and 1982"). The guidelines from that bygone era were based on "surface impoundments," which are essentially pits where wastewater sits, solids (sometimes) settle out, and toxins leach into groundwater. *Id.* at 67,840, 67,851. Impoundments, EPA tells us, have been "largely ineffective at controlling discharges of toxic pollutants and nutrients." *Id.* at 67,840. Consequently, in 2005 the agency began a multi-year study to bring the

steam-electric ELGs into the 21st century. *Id.* at 67,841.

In November 2015, EPA unveiled the final rule: the “Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category,” 80 Fed. Reg. 67,838 (Nov. 3, 2015). The rule updates guidelines for six of the wastestreams that issue from plants and foul our waters. Importantly, the Clean Water Act requires setting new ELGs based on the “Best Available Technology Economically Available” or “BAT.” 33 U.S.C. § 1314(b)(2)(B). BAT is the gold standard for controlling water pollution from existing sources. By requiring BAT, the Act forces implementation of increasingly stringent pollution control methods. *See NRDC v. EPA*, 822 F.2d 104, 123 (D.C. Cir. 1987) (describing the Act as “technology-forcing”).

We consider a challenge to the final rule brought by various environmental petitioners. *1004 They target two discrete parts of the rule: the new ELGs for “legacy wastewater” (wastewater from five of the six streams generated before a specific date) and for “combustion residual leachate” (liquid that percolates through landfills and impoundments). These two categories account for massive amounts of water pollution. For instance, leachate alone would qualify as the 18th-largest source of water pollution in the nation, producing more toxic-weighted pound equivalents than the entire coal mining industry. The environmental petitioners’ basic complaint is that EPA set an unlawful BAT for these two categories. Whereas the BAT for the other streams adopts modern technologies, they claim the agency arbitrarily set BAT for legacy wastewater and leachate using the same archaic technology in place since 1982—namely, impoundments. It was as if Apple unveiled the new iMac, and it was a Commodore 64.

The environmental petitioners challenge those portions of the rule under the Administrative Procedure Act and the well-worn *Chevron* test governing review of agency action. *See Chevron, USA, Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). For the reasons discussed below, we agree that the portions of the rule regulating legacy wastewater and combustion residual leachate are unlawful. Accordingly, we VACATE those portions of the rule and REMAND to the agency for reconsideration.

I. Background

A. The Clean Water Act

The Clean Water Act (“CWA” or “Act”), 86 Stat. 833, as amended, 33 U.S.C. § 1251 *et seq.*, was enacted over President Nixon’s veto in 1972. *See Train v. City of New York*, 420 U.S. 35, 40, 95 S.Ct. 839, 43 L.Ed.2d 1 (1975). Few laws have shouldered a weightier burden—namely, “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a); *see also, e.g., City of Milwaukee v. States of Illinois and Michigan*, 451 U.S. 304, 318, 101 S.Ct. 1784, 68 L.Ed.2d 114 (1981) (“Congress’ intent in enacting [the CWA] was clearly to establish an all-encompassing program of water pollution regulation.”); *Am. Petroleum Inst. v. EPA*, 661 F.2d 340, 343-44 (5th Cir. Unit A Nov. 13, 1981) (“*API I*”) (noting CWA’s “ambitious purpose”). To that end, the Act makes “unlawful” the “discharge of any pollutant by any person” into the nation’s “navigable waters,” unless otherwise permitted. 33 U.S.C. §§ 1311(a), 1362(7), (12).¹

We have previously detailed the Act’s “distinct, though interlocking, regulatory schemes.” *Chem. Mfrs. Ass’n v. EPA*, 870 F.2d 177, 195 (5th Cir. 1989) (“*CMA*”), *clarified on reh’g*, 885 F.2d 253.² Here we *1005 focus on one of the Act’s key regulatory tools: “effluent limitation guidelines” (“ELGs” or “guidelines”), which are nationwide standards set by the EPA Administrator to govern pollutant discharges from point sources. *See* 33 U.S.C. § 1314(b) (authorizing Administrator to set “effluent limitation guidelines” for “classes and categories of point sources”); *Tex. Oil & Gas*, 161 F.3d at 927 (“ELGs are the rulemaking device prescribed by the CWA to set national effluent limitations for categories and subcategories of point sources”).³

The Act requires ELGs to be based on technological feasibility rather than on water quality. *Id.* at 927 (citing *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 130-31, 97 S.Ct. 965, 51 L.Ed.2d 204 (1977); *API I*, 661 F.2d at 343-44). That is, the Administrator must “require industry, regardless of a discharge’s effect on water quality, to employ defined levels of technology to meet effluent limitations.” *API I*, 661 F.2d at 344; *see also Tex. Oil & Gas*, 161 F.3d at 927 (ELGs are “technology-based rather than harm-based” insofar as they “reflect the capabilities of available pollution control technologies to prevent or limit different discharges rather than the impact that those discharges have on the waters”). The Act therefore mandates a system in which, as available pollution-control technology advances, pollution-discharge limits will tighten. *See, e.g., Nat’l Crushed Stone*, 449 U.S. at 69, 101 S.Ct. 295 (the Act “provides for increasingly stringent effluent limitations”) (citing 33 U.S.C. § 1311(b)); *CMA*, 870 F.2d at 196 (the

Act requires compliance with “technology-based pollutant-effluent limitations that, in time, will become more stringent”) (citing 33 U.S.C. §§ 1311(b), 1314(b)). The D.C. Circuit accurately described this aspect of the Act’s scheme as “technology-forcing,” meaning it seeks to “press development of new, more efficient and effective [pollution-control] technologies.” *NRDC v. EPA*, 822 F.2d 104, 123 (D.C. Cir. 1987) (“*NRDC I*”); *see also*, *e.g.*, *NRDC v. EPA*, 808 F.3d 556, 563-64 (2nd Cir. 2015) (“*NRDC II*”) (describing ELG scheme as “technology-forcing, meaning it should force agencies and permit applicants to adopt technologies that achieve the greatest reductions in pollution”) (citing *NRDC I*).⁴

The Act prescribes various technological standards to be used in setting effluent limitations. Two are relevant here: “best practicable control technology currently available” (“BPT”) and “best available technology economically achievable” (“BAT”). *Compare* *1006 33 U.S.C. §§ 1311(b)(1)(A); 1314(b)(1)(B) (BPT), *with id.* §§ 1311(b)(2)(A); 1314(b)(2)(B) (BAT). The less stringent of these two standards is BPT, which the Supreme Court has described as only “a first step toward [the Act’s] goal.” *Nat’l Crushed Stone*, 449 U.S. at 75 n.14, 101 S.Ct. 295; *see also*, *e.g.*, *BP Explor. & Oil, Inc. v. EPA*, 66 F.3d 784, 789 (6th Cir. 1995) (describing BPT as “the first stage of pollutant reduction”). BPT applied to limitations on direct discharges of pollutants during an interim period (originally slated to end in 1984 but later extended to 1989). 33 U.S.C. § 1311(b)(1)(A); *Tex. Oil & Gas*, 161 F.3d at 927-28; *CMA*, 870 F.2d at 196. Instead of defining BPT, the Act lists various factors the Administrator must consider in determining it—including an explicit cost/benefit analysis: “the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application.” 33 U.S.C. § 1314(b)(1)(B).⁵ We have explained that “BPT limitations are intended to represent the average of the best levels of performance by existing plants of various sizes, ages, and unit processes within the category or subcategory for control of conventional pollutants.” *CMA*, 870 F.2d at 203 (citing 52 Fed. Reg. 42,525); *see also*, *e.g.*, *Nat’l Crushed Stone*, 449 U.S. at 75-76, 101 S.Ct. 295 (discussing BPT).

The stricter of the two standards is BAT, which has applied to existing, direct discharges of toxic and non-conventional pollutants since March 31, 1989. *See* 33 U.S.C. §§ 1311(b)(2)(A); 1314(b)(2)(A); *Tex. Oil & Gas*, 161 F.3d at 927-28; *see also* *BP Explor.*, 66 F.3d at 790 (describing BAT as “the second stage” of pollutant reduction). When pollutants are regulated under this standard, the EPA “must set discharge limits that reflect the amount of pollutant that would be discharged by a point source employing the best available technology that

the EPA determines to be economically feasible across the category or subcategory as a whole.” *Tex. Oil & Gas*, 161 F.3d at 928. We have held that BAT limitations must “be based on the performance of the single best-performing plant in an industrial field.” *CMA*, 870 F.2d at 226. In describing the relationship between BAT and BPT, the Supreme Court has explained that a BAT must achieve “reasonable further progress” towards the Act’s goal of eliminating pollution, and BPT serves as the “prior standard” for measuring that progress. *See Nat’l Crushed Stone*, 449 U.S. at 75, 101 S.Ct. 295 (explaining that “BPT serves as the prior standard with respect to BAT[’s]” reasonable further progress requirement). As with BPT, the Act lists factors the Administrator must consider in determining BAT. 33 U.S.C. § 1314(b)(2)(B).⁶ The Administrator has “considerable discretion” in weighing those *1007 factors. *Tex. Oil & Gas*, 161 F.3d at 928 (citation omitted). Unlike BPT, however, the BAT factors omit a cost/benefit analysis and replace it with a requirement to consider only “the cost of achieving such effluent reduction.” *Id.*; *see also*, *e.g.*, *Nat’l Crushed Stone*, 449 U.S. at 71, 101 S.Ct. 295 (BPT and BAT factors are “similar ... except that in assessing BAT total cost is no longer to be considered in comparison to effluent reduction benefits”). Indeed, the Supreme Court has explained that, unlike BAT, “BPT limitations do not require an industrial category to commit the maximum economic resources to pollution control, even if affordable.” *Nat’l Crushed Stone*, 449 U.S. at 75, 101 S.Ct. 295.⁷

B. The Final Rule

The rule at issue in this case regulates effluent discharges from steam-electric power plants. Those plants burn nuclear or fossil fuels to heat water in boilers, generating steam that drives turbines connected to electric generators. 80 Fed. Reg. 67,839 n.1. This process produces something nearly everyone regards as good: electricity. Indeed, the plants regulated by the rule provide most of the electricity annually produced in the United States. But the process also produces something everyone regards as bad: pollution. According to EPA, discharges from these plants account for “about 30 percent of all toxic pollutants discharged into surface waters by all industrial categories regulated under the CWA.” *Id.* at 67,839-40; *see also*, *e.g.*, *Michigan v. EPA*, — U.S. —, 135 S.Ct. 2699, 2705, 192 L.Ed.2d 674 (2015) (addressing regulation of air pollution from power plants under the Clean Air Act); *ConocoPhillips Co. v. EPA*, 612 F.3d 822, 826 (5th Cir. 2010) (addressing regulation of cooling water systems at power plants). For instance,

power plant discharges contain toxic metals such as mercury, arsenic, lead, and selenium, which bioaccumulate in fish, accumulate in lake and reservoir sediment, and pollute drinking water supplies. People who eat the tainted fish or drink the tainted water can suffer negative health consequences such as cancer, cardiovascular disease, neurological disorders, kidney and liver damage, and lowered IQs (in children). *Id.* at 67,840.

EPA first promulgated and then revised ELGs for steam-electric power plants in 1974, 1977, and 1982. *See id.*; *see also* 39 Fed. Reg. 36,186 (Oct. 8, 1974); 42 Fed. Reg. 15,690 (Mar. 23, 1977); 47 Fed. Reg. 52,290 (Nov. 19, 1982). Those guidelines are now, in the agency's words, "out of date," because "[t]hey do not adequately control the pollutants (toxic metals and other[s]) discharged by this industry, nor do they reflect relevant process and technology advances that have occurred in the last 30-plus years." 80 Fed. Reg. 67,840. The old rules and the processes they regulated are relics of the past:

The processes employed and pollutants discharged by the industry look very different today than they did in 1982. Many plants, nonetheless, still treat their wastewater using only surface impoundments, which are largely ineffective at controlling discharges of toxic pollutants and nutrients.

***1008** *Id.* ("Surface impoundments" are ponds designed to allow particulates to settle out of wastewater by force of gravity. *See infra.*) Happily, though, EPA reports that, "[i]n the several decades since the steam electric ELGs were last revised," technologies that are more effective, "affordable," and "widely available" have "increasingly been used at plants." *Id.* Thus, EPA began a new rulemaking to update power plant ELGs. The agency conducted a detailed industry study⁸ from 2006-2009 and on June 7, 2013 issued a proposed rule, 78 Fed. Reg. 34,432, 34,439, that generated over 200,000 comments. 80 Fed. Reg. 67,844. On November 3, 2015 the agency issued a final rule entitled "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category" ("final rule" or "rule"). 80 Fed. Reg. 67,838.

The rule addresses these six streams produced by power plants:

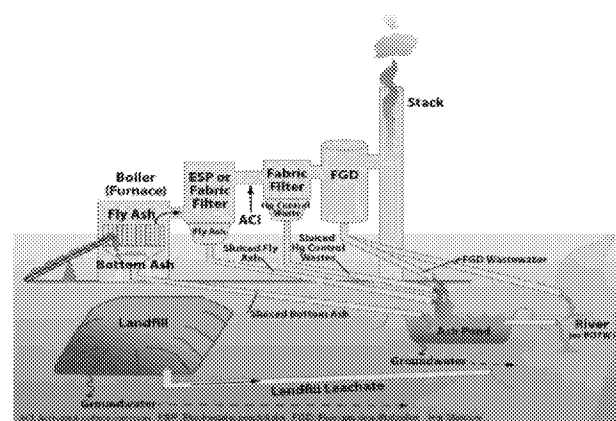
1. Flue gas desulfurization (FGD) wastewater
2. Fly ash transport wastewater
3. Bottom ash transport wastewater
4. Flue gas mercury control (FGMC) wastewater ("Hg control waste")

5. Combustion residual leachate (or "Leachate")

6. Gasification wastewater (not depicted in figure below).

80 Fed. Reg. 67,846-47.⁹ The rule treats another category ("legacy" wastewater), which is a subset of five other streams. *Infra* I.B.1.¹⁰ This diagram illustrates how such streams are produced:

***1009**



When EPA originally regulated steam-electric effluents in the 1970s and 1980s, it did so under the less-stringent BPT standard, *see supra* I.A, and set BPT for bottom ash transport water and leachate as surface impoundments. *See* 80 Fed. Reg. 67,848-49. Surface impoundments, or "ash ponds," are essentially watery pits that "rely on gravity to remove particulates from wastewater" and were "the technology basis for the previously promulgated BPT effluent limitations for low volume waste sources." *Id.* at 67,840, 67,851. As the new rule describes, however, the ensuing three decades have rendered that BPT standard "out of date," because it "do[es] not adequately control the pollutants (toxic metals and other[s]) discharged by this industry, nor do[es] [it] reflect relevant process and technology advances that have occurred in the last 30-plus years." *Id.* at 67,840. Moreover, the Act required that the new guidelines for existing direct¹¹ discharges conform to the stricter BAT standard. *See* 33 U.S.C. § 1311(b)(2)(A), 80 Fed. Reg. 67,848-49; *see supra* I.A.

EPA thus considered more advanced control methods, which it notes are "affordable technologies that are widely available and already in place at some plants." 80 Fed. Reg. 67,840. The agency describes those methods as follows:

• **Chemical precipitation** means treating wastewater by introducing chemicals that will react with substances currently dissolved or suspended in the water to produce a solid, non-soluble *precipitate*,

which then can be filtered out or left to settle to the bottom of the wastewater. *EPA Wastewater Technology Fact Sheet*, EPA 832-F-00-018 (Sept. 2000).

- **Biological treatment** means introducing bacteria or other microorganisms to remove pollutants, specifically *1010 “heavy metals, selenium, and nitrates.” 80 Fed. Reg. 67,850.
- **Dry handling**, for fly ash, means “a dry vacuum system that employs a mechanical exhauster to pneumatically convey the fly ash (via a change in air pressure) from hoppers directly to a silo,” without getting the ash wet. *Id.* at 67,852. For bottom ash, dry handling refers to “a system in which bottom ash is collected in a water quench bath and a drag chain conveyor (mechanical drag system) then pulls the bottom ash out of the water bath on an incline to dewater the bottom ash.” *Id.*
- **Evaporation**, for FGD wastewater and gasification wastewater, means using “a falling-film evaporator (also known as a brine concentrator) to produce a concentrated wastewater stream (brine) and a distillate stream.” *Id.* at 67,838, 67,853.

From those options EPA selected the following technologies as BAT for the various wastestreams:

Wastestreams	Technology basis for the main BAT/NSPS/PS/PSNS regulatory options
FGD Wastewater.....	Chemical Precipitation + Biological Treatment
Fly Ash Transport Water.....	Dry handling
Bottom Ash Transport Water.....	Dry handling / Closed loop
FGMC Wastewater.....	Dry handling
Gasification Wastewater.....	Evaporation
Leachate.....	Impoundment (Equal to BPT)

80 Fed. Reg. 67848-49 (adapted from Table VIII-1-Final Rule: Steam Electric Main Regulatory Options). As shown, the rule set more advanced technologies as BAT for five of the six wastestreams. *See also id.* at 67,850, 67,852, 67,853 (explaining selection for each stream). For leachate and “legacy” wastewater, however, the rule selected “impoundment” as BAT, the same technology set as BPT in 1982. *Id.* at 67,854. Our focus is on the rule’s treatment of those streams, and so we provide additional detail below.

1. Legacy Wastewater

Legacy wastewater is not a distinct type of wastestream. Instead, as the final rule explains, the term describes wastewater from five of the streams (FGD, fly ash,

bottom ash, FGMC, and gasification wastewater) that is “generated prior to” a future date. 80 Fed. Reg. at 67,854. That date, which is determined by the permitting authority, is required to be “as soon as possible beginning November 1, 2020 but no later than December 31, 2023.” 82 Fed. Reg. 43,496. Wastewater from streams generated before that date is denominated “legacy” wastewater and is not subject to the stricter BAT applicable to those streams. *Id.* Instead, the BAT for legacy wastewater is “equal to the previously promulgated BPT regulations” in effect since 1982—namely, impoundments. *Id.* This means that legacy wastewater is allowed by the final rule to contain the same quantity of toxic pollutants allowed since 1982. *See id.* (setting BAT for legacy wastewater “equal to the previously promulgated BPT limitations on [total suspended solids] in the discharge of fly ash transport water, bottom ash transport water, and low volume waste sources”); *see also EPA Study Report*, EPA 821-R-09-008, at 5-20 (table listing pollutant concentrations at several individual impoundments studied during the rulemaking process). The “legacy” category will thus encompass a massive *1011 amount of wastewater from the five composite streams. For instance, according to the EPA’s Study Report, in 2008 alone the average plant produced over 2.7 billion gallons of fly ash transport water per year, as well as over 1.1 billion gallons of bottom ash transport water. *Id.* at 5-6, 5-7.

The rule imposes much more stringent limits on wastewater from these same streams generated *after* the date to be set by the permitting authority (again, between November 1, 2020 and December 31, 2023). For instance, EPA found that a combination of chemical precipitation and biological treatment was the BAT for treating pollution from non-legacy FGD wastewater, and that “dry handling” (a technique for disposing of fly ash and bottom ash without adding water) was the BAT for non-legacy ash wastestreams. *Id.* at 67,850-53. These technologies are significantly newer than surface impoundments, and EPA concluded they were the superior option for treating pollution in non-legacy wastewater. *Id.*

The rule accounts for the discrepancy between legacy and non-legacy wastewater regulations in various ways. For instance, it explains that legacy wastewater “already exists in wet form” and would thus not be amenable to dry handling, and also that EPA lacked data on whether legacy wastewater could be “reliably incorporated” into a closed-loop process “given the variation in operating practices among surface impoundments containing legacy wastewater.” *Id.* at 67,854-55. The rule also asserts that EPA lacked sufficient data to determine whether chemical or biological treatment would be effective on legacy

wastewater. Legacy wastewater, the agency explained, is often “commingled”—meaning different streams are mixed together in an impoundment—making testing and data collection difficult. *Id.* at 67,855. For instance, commingling may result in varying the concentration and “flow rate” of pollutants in an impoundment. *Id.* The rule acknowledges that multiple plants are in fact using chemical precipitation to treat commingled wastewater, but it nonetheless asserts that EPA lacks the requisite data from those plants. *Id.* at 67,855 n.29. Finally, the rule also acknowledges that a few plants discharge from impoundments containing non-commingled FGD legacy wastewater, but it nonetheless declines to establish a stricter BAT for that stream as well. *Id.* at 67,855. The rule explains that, in the agency’s view, imposing the stricter technologies even on non-commingled legacy wastewater would create bad “incentives”—for instance, encouraging plants to begin commingling FGD with other wastewaters or to release FGD wastewater from impoundments on an “accelerated schedule” prior to the compliance date. *Id.*

2. Leachate

The final rule describes leachate as follows:

Leachate includes liquid, including any suspended or dissolved constituents in the liquid, that has percolated through or drained from waste or other materials placed in a landfill, or that passes through the containment structure (e.g., bottom, dikes, berms) of a surface impoundment.

80 Fed. Reg. 67,847. Where leachate occurs in a lined landfill or impoundment, it is typically collected and transported to an impoundment, where it is either “discharge[d] ... directly to receiving waters” or recycled to another impoundment prior to discharge. *Id.* Unlined landfills or impoundments simply “allow the leachate to potentially migrate to nearby ground waters, drinking water wells, or surface waters.” *Id.* The rule explains that “surface impoundments are the most widely used systems to treat ... leachate.” *Id.* Elsewhere, the rule acknowledges that *1012 “[g]round water contamination from surface impoundments” containing power plant wastewater “threatens drinking water, as evidenced by more than 30 documented cases.” *Id.* at 67,840; see also *EPA Study Report*, EPA 821-R-09-008, at 3-24 (landfill leachate diagram). The EPA study detailed the size of leachate pollution: Given plants using current technologies (mostly surface impoundments), leachate pollution amounts to 70,300 toxic-weighted pound equivalents per year. See *Technical Development Document (“TDD”)*,

EPA-821-R-15-007, at 10-39. Leachate thus accounts for more equivalent pollution than the entire coal mining industry. *Id.*; *Annual Effluent Guidelines Review Report*, EPA-821-R-16-002, at 2-26 (listing pollution from other industries).

The final rule sets BAT for leachate equal to the previous BPT standard established in 1982. *Id.* at 67,854. The agency offers two primary justifications for its decision not to regulate leachate with any of the more advanced control technologies now available. First, the rule explains that EPA called for comments on leachate regulation during notice-and-comment rulemaking, but that “[c]ommenters did not provide information that the EPA could use to establish BAT limitations” for leachate. *Id.* at 67,854. Second, the rule asserts that leachate forms “a very small portion of the pollutants discharged collectively by all steam power plants.” *Id.* The agency reasons that, because the new BAT limits established for wastewater from other streams will substantially curtail total power plant pollution, the new rule “represents reasonable further progress toward the CWA’s goals” even without establishing any stricter controls on leachate. *Id.*

II. Procedural History

Four separate lawsuits challenging the final rule were originally brought in the Second, Fifth, Eighth, and Ninth Circuits.¹² Different groups of petitioners challenged different parts of the rule. Various power companies (“Industry Petitioners”) challenged the regulation of non-legacy FGD and gasification wastewater.¹³ Two water company associations (“Water Company Petitioners”), challenged the non-legacy FGD wastewater regulation.¹⁴ Finally, various environmental groups (“Environmental Petitioners” or “petitioners”) challenged the regulation of legacy wastewater and leachate.¹⁵ The four cases were consolidated by the United States Judicial Panel on Multidistrict Litigation and randomly assigned to our court.¹⁶ The Utility Water Act Group (“UWAG”) has since intervened to defend those portions of the rule challenged by the Environmental Petitioners.

*1013 In August 2017, we granted EPA’s motion to sever and hold in abeyance the Industry Petitioners’ and Water Company Petitioners’ challenges to the final rule. In September 2017, EPA announced it would reconsider the rule’s regulations concerning non-legacy FGD and bottom ash transport water. See 82 Fed. Reg. 43,494.¹⁷ As a result of these procedural developments, the challenges to the final rule raised by the Industry Petitioners and the Water

Company Petitioners are not before us. We address only the challenges brought by the Environmental Petitioners.

III. Standard of Review

[1] [2] [3]The Environmental Petitioners challenge the legacy wastewater regulation under the Administrative Procedure Act (“APA”). As relevant here, a court “shall ... hold unlawful and set aside” agency action under the APA if it finds such action was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). Under this “highly deferential” standard, *Avoyelles Sportsmen’s League, Inc. v. Marsh*, 715 F.2d 897, 904 (5th Cir. 1983), we are “not empowered to substitute [our] judgment for that of the agency.” *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416, 91 S.Ct. 814, 28 L.Ed.2d 136 (1971). This is particularly so where the agency’s decision turns on “its evaluation of complex scientific data within its technical expertise.” *BCCA Appeal Grp. v. EPA*, 355 F.3d 817, 824 (5th Cir. 2003) (citing *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103, 103 S.Ct. 2246, 76 L.Ed.2d 437 (1983)). Indeed, “[i]f the agency’s reasons and policy choices conform to minimal standards of rationality, then its actions are reasonable and must be upheld.” *Tex. Oil & Gas Ass’n*, 161 F.3d at 934. Furthermore, the “EPA’s choice of analytical methodology [in setting and enforcing standards] is entitled to a presumption of regularity,” leaving challengers with a “considerable burden” to carry. *Am. Petroleum Inst. v. EPA*, 787 F.2d 965, 983 (5th Cir. 1986).

[4] [5]Our review under the APA is not toothless, however. We must set aside agency action if the agency “entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983) (“*State Farm*”); see generally, e.g., *Atchafalaya Basinkeeper v. U.S. Army Corps of Eng’rs*, 894 F.3d 692, 697 (5th Cir. 2018) (reciting *State Farm* standard). “[W]e must also ensure that the agency ‘examine[d] the relevant data and articulate[d] a satisfactory explanation for its action,’ ” and assess “ ‘whether the [agency’s] decision was based on a consideration of the relevant factors[.]’ ” *10 Ring Precision, Inc. v. Jones*, 722 F.3d 711, 723 (5th Cir. 2013) (quoting *1014 *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856); see also, e.g., *Michigan v. EPA*, — U.S. —,

135 S.Ct. 2699, 2706, 192 L.Ed.2d 674 (2015) (explaining that “agency action is lawful only if it rests ‘on a consideration of the relevant factors’ ”) (quoting *State Farm*, *supra*); *U.S. Chamber of Commerce v. U.S. Dep’t of Labor*, 885 F.3d 360, 382 (5th Cir. 2018) (“Illogic and internal inconsistency are characteristic of arbitrary and unreasonable agency action.”); *Illinois Pub. Telecom. Ass’n v. FCC*, 117 F.3d 555, 566 (D.C. Cir. 1997), *decision clarified on reh’g*, 123 F.3d 693 (unexplained and “seemingly illogical” decisions are arbitrary and capricious). Furthermore, we “may uphold agency action only on the grounds that the agency invoked when it took the action.” *Michigan v. EPA*, 135 S.Ct. at 2712 (citing *SEC v. Chenery Corp.*, 318 U.S. 80, 87, 63 S.Ct. 454, 87 L.Ed. 626 (1943)).

[6] [7]The Environmental Petitioners challenge the leachate regulation under the two-step framework articulated in *Chevron, USA, Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984), governing judicial review of agency interpretations of statutes. See generally, e.g., *BCCA Appeal Grp.*, 355 F.3d at 824 (discussing *Chevron* in context of challenge to Clean Air Act regulations). At step one, the court considers “whether Congress has directly spoken to the precise question at issue.” *Chevron*, 467 U.S. at 842, 104 S.Ct. 2778. If Congress has directly spoken on an issue, that settles the matter: “[T]he Court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” *Id.* at 842-43, 104 S.Ct. 2778. Only if the statutory text is ambiguous can the court proceed to step two, asking whether the agency’s construction of the statute is “permissible.” *Id.* at 843, 104 S.Ct. 2778. If the construction is permissible, it should be upheld. “[A] court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency.” *Id.* “*Chevron* review and arbitrary and capricious review overlap at the margins,” specifically at *Chevron* step two. *Indep. Petroleum Ass’n of Am. v. Babbitt*, 92 F.3d 1248, 1258 (D.C. Cir. 1996); see also *Nutraceutical Corp. v. Von Eschenbach*, 459 F.3d 1033, 1038 (10th Cir. 2006).

IV. Analysis

A. Challenge to Legacy Wastewater Regulation

We first consider petitioners’ challenge¹⁸ to the final rule’s regulation of *1015 legacy wastewater. As already

explained, legacy wastewater is not a separate wastewater stream but instead a subset of five of the other streams. *Supra* I.B.1. Specifically, legacy wastewater is defined by *when* wastewater is generated: Wastewater “generated prior to” the compliance date set for the new rule by a permitting authority is denominated “legacy” wastewater. *See* 80 Fed. Reg. 67,854. Instead of subjecting legacy wastewater to the more advanced and effective technologies that kick in after the rule’s compliance date (*i.e.*, chemical precipitation, biological treatment, dry handling, or evaporation), the rule sets BAT for legacy wastewater as equal to the BPT previously set in 1982 (*i.e.*, surface impoundments). *See id.* at 67,854-55.

1.

¹⁸¹Petitioners challenge that decision as arbitrary and capricious under the APA on two grounds. First, they claim the Act does not grant the Administrator authority to base BAT limits on *when* waste is generated, but instead requires setting BAT limits for “categories and classes of point sources” regardless of when waste is generated. *See, e.g., State Farm*, 463 U.S. at 43, 103 S.Ct. 2856 (explaining that, “[n]ormally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider”). Second, they claim that the rulemaking record refutes the conclusion that surface impoundments are BAT for legacy wastewater because, among other things, the final rule itself demonstrates that impoundments are ineffective at removing toxic pollutants. *See, e.g., id.* (an agency rule would also be arbitrary and capricious if it “offered an explanation for its decision that runs counter to the evidence before the agency”). We need not reach petitioners’ first argument, because we conclude for multiple reasons that EPA acted arbitrarily and capriciously by setting a BAT limit for legacy wastewater equal to the outdated BPT standard of surface impoundments.

First, the final rule repeatedly recognizes that impoundments are “largely ineffective” at removing toxins from wastewater. 80 Fed. Reg. 67,840. Impoundments “rely on gravity to remove particulates from wastewater,” but the rule explains that “gravity in surface impoundments” fails to “effectively or reliably” remove “[p]ollutants ... present mostly in soluble (dissolved) form, such as selenium, boron, and magnesium,” and also fails to “effectively” remove the dissolved portion of “metals present in both soluble and particulate forms (such as mercury).” *Id.* at 67,851. When ingested by humans either through drinking water or

through seafood, these metals can lead to serious harms including “cancer, cardiovascular disease, neurological disorders, kidney and liver damage, and lowered IQs in children.” *Id.* at 67,840. Additionally, the rule informs us that various factors can alter chemical conditions in impoundments and thus compromise their effectiveness: For instance, low pH in the impoundment environment can convert particulate metals to soluble form, reducing the “settling efficiency in the impoundments” and “leading to increased levels of dissolved metals and high concentrations of metals in discharges from surface impoundments.” *Id.* at 67,851. Even the changing seasons—in an effect called “seasonal turnover”—impair impoundments by cooling the upper layer of water and causing it to sink, resulting in “resuspension of solids ... and a consequent *1016 increase in the concentrations of pollutants discharged from the impoundment.” *Id.*

These conceded defects in impoundments are in critical tension with EPA’s choosing them as BAT for legacy wastewater. After all, BAT is supposed to be “the CWA’s most stringent standard” for setting discharge limits for existing sources. *Tex. Oil & Gas*, 161 F.3d at 928; *see also* 33 U.S.C. §§ 1311(b)(2), 1314(b)(2). We are rightfully skeptical when EPA specifies impoundments as BAT while, in the same breath, detailing how bad those impoundments are in stemming the discharge of toxic pollution. *See, e.g., CMA*, 885 F.2d at 265 (remanding because EPA “failed ... [to] demonstrate a reasonable basis for its conclusion” that its chosen BAT was as effective as a proposed alternative).

Second, as the rule also recounts, the flaws of impoundments are precisely why EPA refused to set them as BAT for five of the six wastewater streams at issue here. *See* 80 Fed. Reg. 67,851-53. For instance, the rule states that “EPA did not select surface impoundments as the BAT technology for FGD wastewater because it *would not result in reasonable further progress toward eliminating the discharge of all pollutants, particularly toxic pollutants.*” *Id.* at 67,851 (emphasis added); *see also id.* (explaining that EPA declined to set impoundments as BAT “[b]ecause many of the pollutants of concern in FGD wastewater are present in dissolved form and *would not be removed by surface impoundments*”) (emphasis added). EPA likewise declined to set impoundments as BAT for fly ash transport water, bottom ash transport water, FGMC wastewater, and gasification water, and in each case explained that it did so “for the same reasons ... that EPA did not identify surface impoundments as BAT for FGD wastewater.” *Id.* at 67,852 (fly ash), 67,853 (bottom ash, FGMC, and gasification wastewater).

In other words, for five of the six wastewater streams

regulated by the final rule (the one exception is leachate, discussed in V.B. *infra*), EPA affirmatively *rejected* surface impoundments as BAT “because [they] would not result in reasonable further progress toward eliminating the discharge of all pollutants, particularly toxic pollutants.” *Id.* at 67,851.¹⁹ And yet, having rejected impoundments as BAT because they would not achieve “reasonable further progress” toward eliminating pollution from those streams, EPA turned around and *chose* impoundments as BAT for each of those same streams generated before the compliance date. That paradoxical action signals arbitrary and capricious agency action. *See, e.g., Chamber of Commerce*, 885 F.3d at 382 (“Illogic and internal inconsistency are characteristic of arbitrary and unreasonable agency action.”); *see also, e.g., GameFly, Inc. v. Postal Regulatory Comm’n*, 704 F.3d 145, 148 (D.C. Cir. 2013) (explaining that agency action “‘illogical on its face’ ” may be arbitrary and capricious) (quoting *Am. Fed’n of Gov’t Emps., Local 2924 v. Fed. Labor Relations Auth.*, 470 F.3d 375, 380 (D.C. Cir. 2006)). It also strongly suggests that EPA has contravened the plain language of the CWA, which defines BAT as the technology that “*will result in reasonable further progress*” toward pollutant discharge elimination. 33 U.S.C. § 1311(b)(2)(A) (emphasis added); *see also, e.g., Nat’l Crushed Stone*, 449 U.S. at 74-75, 101 S.Ct. 295 *1017 (discussing “reasonable further progress” component of BAT).

Third, the final rule explains that the shortcomings of surface impoundments were a key factor in motivating EPA to conduct the 2006-2009 study and revise water pollution regulations for power plants in the first place. The rule describes the previous ELGs from 1974, 1977, and 1982 as “out of date,” because they failed to “adequately control the pollutants ... discharged by this industry” and failed to “reflect relevant process and technology advances that have occurred in the last 30-plus years.” 80 Fed. Reg. 67,840; *see also id.* (stating that, “[i]n the several decades since the steam electric ELGs were last revised, [more effective] technologies have increasingly been used at plants”). And the rule minces no words in laying the shortcomings of the prior ELGs at the feet of surface impoundments:

The processes employed and pollutants discharged by the industry look very different today than they did in 1982. Many plants, nonetheless, still treat their wastewater using only surface impoundments, which are largely ineffective at controlling discharges of toxic pollutants and nutrients.

Id.

Thus, the final rule describes impoundments as an outdated and ineffective pollution control technology, and

yet the same rule chooses to freeze impoundments in place as BAT for legacy wastewater. That is inconsistent with the “technology-forcing” mandate of the CWA. *NRDC II*, 808 F.3d at 563-64 (citing *NRDC I*, 822 F.2d at 123). To that point, the Supreme Court has explained that BAT has an inbuilt “reasonable further progress” standard and that “BPT serves as the prior standard with respect to BAT.” *Nat’l Crushed Stone*, 449 U.S. at 75, 101 S.Ct. 295. Yet here EPA appears to have conflated the prior standard with the advanced one: It has selected as BAT the same three-decades-old technology previously set as BPT—a technology the current rule condemns as anachronistic and ineffective at eliminating pollution discharge. In other words, EPA asks us to believe that impoundments are both archaic and cutting-edge at the same time. That we cannot do. *See GameFly*, 704 F.3d at 148; *Chamber of Commerce*, 885 F.3d at 382.

Fourth, the final rule strongly indicates that other available technologies are far better than impoundments at removing pollutants from the various streams that comprise legacy wastewater. For instance, after explaining why impoundments are ineffective at removing toxic metals from FGD wastewater, the rule states that a combination of chemical precipitation and biological treatment *is* better at removing those pollutants. *Id.* at 67,850-51. Importantly, the rule explicitly concludes that “[c]hemical precipitation and biological treatment are *more effective than surface impoundments* at removing both soluble and particulate forms of metals.” *Id.* at 67,851 (emphasis added). The rule also relies on that reasoning to justify rejecting impoundments as BAT for fly ash transport water, bottom ash transport water, FGMC wastewater, and gasification wastewater. *Id.* at 67,852-53. Moreover, the rule categorically states that more advanced control methods, such as chemical and biological methods, “are affordable technologies that are widely available, and already in place at some plants.” *Id.* at 67,840.

These affirmative findings are difficult, if not impossible, to square with EPA’s decision nonetheless to set 1980s-era impoundments as the BAT for legacy wastewater. To be sure, the agency’s statements in the final rule do not prove that chemical precipitation or biological treatment (or some combination of the two) *are* BAT for legacy wastewater. That is for the agency to decide. But those statements do cast *1018 grave doubt on the agency’s selection of *impoundments* as BAT for legacy wastewater. *See, e.g., Nat’l Crushed Stone Ass’n*, 449 U.S. at 74, 101 S.Ct. 295 (BAT calls for the “maximum use of technology within the economic capability of the [plant] owner or operator”). Once again, the EPA’s own rule strongly indicates that it was arbitrary

and capricious in doing so.²⁰

Fifth and finally, our court has long recognized that “‘Congress intended [BAT] limitations to be based on the performance of the single best-performing plant in an industrial field.’” *Tex. Oil & Gas*, 161 F.3d at 928 (quoting *CMA*, 870 F.2d at 226)); *see also, e.g., Kennecott v. EPA*, 780 F.2d 445 (4th Cir. 1985) (“In setting BAT, EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible.”) (citing *A Legislative History of the Water Pollution Control Act Amendments of 1972*, 93d Cong., 1st Sess. (Comm. Print 1973), at 798). Yet here the rule says nothing to indicate that the choice of impoundments as BAT for legacy wastewater was based on anything like “the performance of the single best-performing plant” in the field. To the contrary, everything the rule says about the record of impoundments over the past three decades indicates that their performance in controlling discharges has been distinctly poor. *See, e.g.*, 80 Fed. Reg. 67,840 (stating that “impoundments ... are largely ineffective at controlling discharges of toxic pollutants and nutrients”); *id.* (stating that “[g]round water contamination from surface impoundments ... threatens drinking water, as evidenced by more than 30 documented cases”); *id.* at 67,851 (declining to set impoundments at BAT for FGD wastewater because various dissolved toxic metals “are not effectively and reliably removed by gravity in surface impoundments”). Moreover, the rule also states that multiple plants are in fact treating legacy wastewater using chemical precipitation, *id.* at 67,855 n.29, a method the rule concedes is “more effective than surface impoundments at removing both soluble and particulate forms of metals[.]” *Id.* at 67,851. Yet the rule merely states—without explanation—that it lacks “data to characterize the effluent from these systems.” *Id.* at 67,855 n.29. That unexplained assertion casts grave doubt on the agency’s BAT decision. *See also infra* V.A.2 (discussing additional problems created by agency’s lack of data excuse).

These shortcomings in the agency’s explanations strongly indicate that its BAT decision simply defaults to the outdated BPT standard that has been demonstrated to be a poor performer by the agency’s own analysis. That is antithetical to the statutorily-mandated BAT standard. *See, e.g., Nat’l Lime Ass’n v. EPA*, 233 F.3d 625, 634 (D.C. Cir.), *as amended on denial of reh’g* (2001) (remanding EPA rule *1019 for failure in agency’s “clear statutory obligation to set emission standards” for various air pollutants); *NRDC v. EPA*, 863 F.2d 1420, 1433 (9th Cir. 1988) (despite EPA’s asserted lack of “complete information” on availability of technology, declaring

BAT limitation invalid because “Congress has demonstrated its intent to require industry to do as much as possible to control toxic discharges”) (citing 33 U.S.C. § 1311(b)(2)(A)(i)).

In sum, we conclude that the EPA’s decision to set surface impoundments as BAT for legacy wastewater was arbitrary and capricious. Far from demonstrating that impoundments are the “best available technology economically achievable” for treating legacy wastewater, the evidence recounted in the final rule shows that impoundments are demonstrably ineffective at doing so and demonstrably inferior to other available technologies. In light of this record, we cannot accept that an outdated, ineffective and inferior technology is BAT when applied to legacy wastewater. No record evidence affirmatively makes that case and, as we have explained, the evidence recounted in the final rule runs in the opposite direction.

2.

EPA defends its choice of impoundments as BAT for legacy wastewater by asserting that “it does not have the data” to justify choosing more advanced pollution control technologies. 80 Fed. Reg. 67,855. The agency explains that most plants “combine some of their legacy wastewater with each other and with other wastestreams,” and that this “commingling” can meaningfully alter the characteristics (specifically, the “flow rate and pollutant concentration”) of the impoundment water. *Id.* Because EPA lacked adequate examples of plants treating commingled wastewater “using anything beyond the surface impoundment itself,” the agency concluded it lacked data to evaluate the performance of other technologies and therefore defaulted to “the previously promulgated BPT limitations” (*i.e.*, impoundments). *Id.* We are unpersuaded.

First, EPA’s arguments about the characteristics of commingled wastewater glide past the key issue before us, which is whether the agency arbitrarily chose *impoundments* as BAT. The agency may lack data on how other technologies interact with commingled wastewater, but it assuredly does not lack data on impoundments. To the contrary, we know that impoundments are ineffective at removing toxic pollutants from the various wastewater streams because the agency’s own rule tells us so, repeatedly, based on over three decades of observation and analysis. *See supra* V.B.1. Nor does EPA’s criticism of impoundments distinguish “legacy” from “non-legacy” wastewater: instead, the agency categorically states that “surface impoundments ... are largely ineffective at

controlling discharges of toxic pollutants and nutrients” from “wastewater.” 80 Fed. Reg. 67,840. To be sure, we do not pretend to second-guess EPA’s assertions about the pertinent “flow rate” and “pollutant concentration” in commingled wastewater, *id.* at 67,855, matters beyond our expertise and authority. But those assertions side-step the legal issue we must decide, which is whether the agency was arbitrary in selecting impoundments as BAT.²¹ Once *1020 again, the agency’s own pointed criticism of impoundments indicates that it was.

Second, the agency’s “lack of data” excuse is untenable on its own terms. In a footnote, the rule concedes that multiple power plants have in fact been using chemical precipitation to treat commingled legacy wastewater. *See id.* at 67,855 n.29 (stating “EPA identified fewer than ten plants that use chemical precipitation to treat waster that contains, among other things, ash transport water”). Yet, the agency baldly asserts that it “does not have any data to characterize the effluent from these systems” and it raises this dearth of information to justify not regulating legacy wastewater under the same BAT standards as non-legacy wastewater (and to justify a demonstrably outdated technology as BAT). *Id.* We have previously rejected EPA’s argument that an asserted lack of “sufficient data” justified the agency’s failure to regulate. *See API I*, 661 F.2d at 357 (rejecting EPA’s argument that its failure to regulate was justified by lack of “sufficient data” where EPA had failed to investigate “in light of ... new information” (internal quotation marks omitted)); *see also, e.g., NRDC II*, 808 F.3d at 573 (concluding that EPA’s failure to gather data can be arbitrary and capricious when the lack of data is “a problem of EPA’s own making”); *see also infra* V.B.2 (further discussing *API I* and *NRDC II*). We reject the argument again here. The final rule recounts (1) the long-recognized deficiencies of impoundments in controlling toxic discharges, 80 Fed. Reg. 67,840; (2) the demonstrated superiority of more advanced technologies in doing so, *id.* at 67,851-53; (3) the availability of those technologies in the industry, *id.* at 67,840, 67,844; and (4) multiple plants’ actual use of one of those advanced technologies (chemical precipitation) to treat commingled legacy wastewater, *id.* at 67,855 n.29. Given those undisputed statements drawn from EPA’s own rule, the agency cannot simply plead a lack of data to justify its decision to set impoundments as BAT. Again, we do not purport to tell the agency what technology it *should* choose as BAT for legacy wastewater. We decide only that, given the agency’s own statements and evidence, it acted arbitrarily in selecting as BAT a pollution control method that decades of data have shown to be ineffective at controlling pollution.

Third, given EPA’s heavy reliance on the characteristics of *commingled* legacy wastewater as a reason for declining stricter regulation, one would expect a different policy for *non-commingled* legacy wastewater. *See* 80 Fed. Reg. 67,855 & n.28 (asserting as key reason for defaulting to impoundments for legacy wastewater the fact that wastewater at the “vast majority” of plants is “commingled” with other streams). Yet we find the opposite: When EPA identified plants that discharge non-commingled legacy wastewater from impoundments, it *still* declined to impose more stringent controls and *still* defaulted to impoundments as BAT. *See id.* at 67,855 (declining to impose controls “other than surface impoundments” on plants that “discharge from an impoundment containing *only legacy FGD wastewater*”); *id.* at 67,855 n.30 (discussing three plants that use impoundments “where the *FGD wastewater is not commingled* with other process wastewaters in the impoundment”) (emphases added). That striking inconsistency undercuts the agency’s “commingling” rationale for not imposing the more *1021 stringent non-legacy BAT standards. *See, e.g., Am. Fed’n of Gov’t Emps., Local 2924 v. Fed. Labor Relations Auth.*, 470 F.3d 375, 380 (D.C. Cir. 2006) (an agency’s decision is “arbitrary and capricious” if “illogical on its own terms”); *see also Chamber of Commerce*, 885 F.3d at 382 (“Illogic and internal inconsistency are characteristic of arbitrary and unreasonable agency action.”).²² What is more, by selecting impoundments as BAT for *any* kind of FGD wastewater (“legacy” or not), the rule flatly contradicts itself: The rule states without exception that for FGD wastewater “[c]hemical precipitation and biological treatment are more effective than surface impoundments at removing” toxic pollutants. 80 Fed. Reg. 67,851.

¹⁹Fourth, even assuming a lack of data prevented EPA from determining BAT for legacy wastewater, nothing required the agency simply to set impoundments as BAT. Instead, EPA could have declined to set nationwide effluent guidelines for legacy wastewater and allowed BAT determinations to be made by each facility’s permitting authority through the NPDES permitting process on a site-specific basis. *See* 40 C.F.R. § 125.3(a), (c)(2) (“Technology based treatment requirements may be imposed ... [o]n a case-by-case basis.”); *Riverkeeper, Inc. v. EPA*, 358 F.3d 174, 203 (2nd Cir. 2004) (“We see no textual bar in sections 306 or 316(b) [of the Clean Water Act] to regulating [certain] structures on a case-by-case basis.”); *Nat’l Wildlife Fed’n v. EPA*, 286 F.3d 554, 566-67 (D.C. Cir. 2002) (“We believe EPA acted both reasonably and within its authority in adopting a case-by-case approach” to regulating certain pollutants from paper mills). The agency took that approach in the current rule by deferring setting BAT and other limits for

metal cleaning wastes, after determining it lacked the necessary data. *See* 80 Fed. Reg. 67,863 (directing permitting authorities to “establish such requirements based on [best professional judgment] for any steam electric power plant discharg[ing]” such waste). Instead of deferring a nationwide effluent guideline and allowing case-by-case determination of BAT by permitting authorities, EPA unaccountably defaulted to impoundments—again, which its own rule recognizes as an out-of-date and ineffective pollution control technology. This is further indication that the rule *1022 respecting legacy wastewater is arbitrary and capricious.²³

In sum, having examined the various justifications set forth for EPA’s final rule on legacy wastewater, and finding each of those explanations wanting in light of the agency record, we conclude that EPA’s rulemaking was arbitrary and capricious. We therefore set aside that part of the final rule and remand to the agency for reconsideration. *See, e.g., Perdue v. FAA*, 172 F.3d 866 (5th Cir. 1999) (“This court shall set aside agency action that is ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’ ” (quoting 5 U.S.C. § 706(2)(A))); *Checkosky v. SEC*, 23 F.3d 452, 491 (D.C. Cir. 1994) (“Section 706(2)(A) [of the APA] provides that a ‘reviewing court’ faced with an arbitrary and capricious agency decision ‘shall’—not may—‘hold unlawful and set aside’ the agency action.”).

We recognize that the agency is entitled to considerable deference in setting BAT limitations. *See, e.g., BCCA Appeal Grp.*, 355 F.3d at 824 (EPA entitled to special deference where its decision turns on “its evaluation of complex scientific data within its technical expertise”); *Tex. Oil. & Gas*, 161 F.3d at 928 (recognizing EPA’s “considerable discretion” in weighing BAT factors). Precisely for that reason, challenges to the agency’s BAT determinations often fail because challengers ask the court to elevate itself as an expert over the agency.²⁴ This case is different. We do not question the scientific or statistical methodologies relied upon by EPA, nor second-guess its weighing of the statutory factors. Instead, we rely on EPA’s own scientific conclusions in the rule itself to conclude that its choice of an outdated and ineffective technology as BAT was unlawful under the Act. That is a legal—not a technical or scientific—conclusion that the APA requires us to make.

*1023 B. Challenge to Leachate Regulation

We turn to the challenge to the rule’s regulation of combustion residual leachate. As explained, *supra* I.B.2, leachate consists of liquid that percolates through a landfill or impoundment and is eventually discharged into water. *See* 80 Fed. Reg. 67,847. The final rule sets BAT for leachate as impoundments, which is the same as the previous BPT for leachate established in 1982. *See id.* at 67,854 (“This rule identifies surface impoundments as the BAT technology basis for control of pollutants in combustion residual leachate ... establish[ing] a BAT limitation on [total suspended solids] in ... leachate equal to the previously promulgated BPT limitation on [total suspended solids] in low volume waste sources.”). EPA offers two justifications for this decision: First, that “[c]ommenters did not provide information that EPA could use to establish [stricter] BAT limitations” for leachate, and, second, that because leachate forms a “very small portion” of overall discharges, the rule’s stricter regulation of *other* wastestreams “already represents reasonable further progress towards the CWA’s goals.” *See id.*; *supra* I.B.2.

The Environmental Petitioners challenge the rule’s leachate regulation under the *Chevron* test for reviewing agency interpretations of statutes. *See Chevron*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694; *see also generally, e.g., Acosta v. Hensel Phelps Constr. Co.*, 909 F.3d 723, 730 (5th Cir. 2018) (summarizing “the two-step framework established in *Chevron*”); Richard J. Pierce, Jr., *Administrative Law Treatise* § 3.2 (“PIERCE”) (discussing “[t]he *Chevron* Two-Step”). Petitioners assert that EPA’s decision to set impoundments as BAT for leachate fails *Chevron* step one by contravening the plain text and structure of the Clean Water Act. Alternatively, petitioners argue that the agency’s decision fails *Chevron* step two by adopting an impermissible construction of the Act. We address each argument in turn.

1.

^[10] ^[11]At *Chevron* step one, we ask whether the pertinent statute “unambiguously foreclose[s]” the agency’s challenged statutory interpretation; if it does, “ ‘that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.’ ” *U.S. Chamber of Commerce v. U.S. Dep’t of Labor*, 885 F.3d 360, 369 (5th Cir. 2018) (quoting *Chevron*, 467 U.S. at 842-43, 104 S.Ct. 2778); *see also, e.g., Acosta*, 909 F.3d at 730 (at *Chevron* step one, the court “must determine ‘whether Congress has directly spoken to the precise question at issue’ ” (quoting *City of Arlington v. FCC*, 569 U.S. 290, 296, 133 S.Ct. 1863, 185

L.Ed.2d 941 (2013))). To answer this question, we rely on “the conventional standards of statutory interpretation”—i.e., “text, structure, and the overall statutory scheme”—as well as “authoritative Supreme Court decisions.” *U.S. Chamber of Commerce*, 885 F.3d at 369 (citing *City of Arlington*, 569 U.S. at 296, 133 S.Ct. 1863; *Chevron*, 467 U.S. at 843 n.9, 104 S.Ct. 2778). We are not to focus myopically on “a particular statutory provision in isolation” because “[t]he meaning—or ambiguity—of certain words or phrases may only become evident when placed in context.” *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 132, 120 S.Ct. 1291, 146 L.Ed.2d 121 (2000). Rather, we must read words “‘in their context,’ ” interpreting the statute “‘as a symmetrical and coherent regulatory scheme,’ ” and “‘fit[ting], if possible, all [the statute’s] parts into an harmonious whole.’ ” *Id.* at 133, 120 S.Ct. 1291 (quoting *Davis v. Mich. Dep’t of Treasury*, 489 U.S. 803, 809, 109 S.Ct. 1500, 103 L.Ed.2d 891 (1989); *1024 *Gustafson v. Alloyd Co.*, 513 U.S. 561, 569, 115 S.Ct. 1061, 131 L.Ed.2d 1 (1995); *FTC v. Mandel Bros., Inc.*, 359 U.S. 385, 389, 79 S.Ct. 818, 3 L.Ed.2d 893 (1959)) (brackets added). Additionally, “we must be guided to a degree by common sense as to the manner in which Congress is likely to delegate a policy decision of such economic and political magnitude to an administrative agency.” *Texas v. United States*, 787 F.3d 733, 760 (5th Cir. 2015) (quoting *Brown & Williamson*, 529 U.S. at 133, 120 S.Ct. 1291). The goal of our *Chevron* step one inquiry is ultimately to “ascertain whether the statute is silent or ambiguous in addressing the precise question at issue.” *Tex. Savings & Cmty. Bankers Ass’n v. Fed. Hous. Fin. Bd.*, 201 F.3d 551, 554 (5th Cir. 2000); see also PIERCE § 3.6 (“The question for the court [at step one] is whether the agency’s construction of the language is within the range of meanings that could be plausibly attributed to the relevant statutory language.”).

Petitioners’ step one attack targets the agency’s justifications for pegging leachate BAT to the same technology set as BPT in 1982—specifically, EPA’s explanation that leachate forms a “very small portion” of collective industry discharges and that the rule’s stricter BAT for other wastestreams represents reasonable overall progress in the industry. See 80 Fed. Reg. 67,854. Petitioners’ various arguments may be grouped into three general categories for convenience of analysis. First, petitioners argue the agency’s rationales contravene the CWA’s text—requiring a BAT to eliminate discharges of “all pollutants” if “technologically and economically achievable,” 33 U.S.C. § 1311(b)(2)(A) (emphasis added)—because, here, the agency has chosen *not* to regulate a significant pollution source (leachate) with a technology EPA admits is achievable (chemical

precipitation). Second, petitioners argue the agency’s decision on the proper control standard for leachate conflates BAT with BPT in a way that contravenes the structure of the Act. Finally, petitioners claim that the agency’s proffered justifications for its leachate regulation appear nowhere in the factors mandated for determining BAT and, indeed, contradict those factors. See 33 U.S.C. § 1314(b)(2)(B) (listing BAT factors).

Petitioners’ initial step one argument places too much weight on the phrase “all pollutants” in § 1311(b)(2)(A). We cannot agree that this statutory phrase, standing alone, squarely forecloses the agency’s decision to maintain leachate BAT at the 1982 BPT standard. To the contrary, we agree with EPA (and with binding precedent) that we must interpret that phrase in context and with reference to the larger statutory scheme. See, e.g., *Brown & Williamson*, 529 U.S. at 132, 120 S.Ct. 1291 (at step one courts should not examine statutory provisions “in isolation” but must “interpret the statute as a symmetrical and coherent regulatory scheme” (internal quotes and citations omitted)). Section 1311(b)(2)(A) does not flatly require that a BAT standard “eliminate[] the discharge of all pollutants” solely if the Administrator finds such elimination “technologically and economically achievable,” as petitioners claim.²⁵ Rather, the phrase petitioners rely on is nested in a complex provision providing that certain effluent limitations

*1025 shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him[,] ... that such elimination is technologically and economically achievable for a category or class of point sources *as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title.*

Id. (emphasis added). The italicized portion of § 1311(b)(2) cross-references the factors set forth in § 1314(b)(2) that are “to be taken into account” by the Administrator in determining BAT for a given point source. See *id.* § 1314(b)(2)(B) (requiring certain “factors relating to the assessment of [BAT]” shall “be taken into account in determining the best measures and practices available to comply with subsection (b)(2) of section 1311 of this title”). The statute requires us to read these two sections in harmony with each other. See, e.g., *Doe v. KPMG*, 398 F.3d 686, 688 (5th Cir. 2005) (requiring that we “read all parts of the statute together to produce a harmonious whole” (citation omitted)). And we have held that the Administrator has “considerable discretion” in evaluating the cross-referenced § 1314(b)(2) factors when making a BAT determination. See, e.g., *Tex. Oil & Gas*, 161 F.3d at 928 (citing *NRDC v. EPA*, 863 F.2d 1420, 1426 (9th Cir. 1988)). Consequently, it is not the case that

§ 1311(b)(2)(A)—standing apart from the factors in § 1314(b)(2)—unambiguously required EPA to set a stricter BAT for leachate. We therefore reject petitioners’ step one argument based on the text of § 1311(b)(2)(A).

^[12]We agree with petitioners, however, that the leachate rule conflates the BAT and BPT standards in a way not permitted by the statutory scheme. The rule pegs BAT for leachate to the decades-old BPT standard, without offering any explanation for why that prior standard is now BAT. That is flatly inconsistent with the Act’s careful distinction between the two standards. As explained, the difference between BAT and BPT is critical to the Act’s “technology-forcing” scheme. *Supra* I.A (quoting *NRDC I*, 822 F.2d 104, 123). BPT is merely the “first step” towards the Act’s pollution reduction goals and provides the “prior standard” against which the stricter BAT is to be measured. *Nat’l Crushed Stone*, 449 U.S. at 69, 101 S.Ct. 295; *id.* at 75 & n.14, 101 S.Ct. 295; *CMA*, 870 F.2d at 196. To that point, Congress designed BPT to reflect merely an average of the best performance levels of existing plants, *CMA*, 870 F.2d at 203, whereas it designed BAT to reflect “ ‘the performance of the single best-performing plant in an industrial field.’ ” *Tex. Oil & Gas*, 161 F.3d at 928 (quoting *CMA*, 870 F.2d at 226). And this critical distinction is reflected in the Act’s structure, which treats BAT and BPT in different subsections, implements them on different timelines, and evaluates them under different factors. *Compare* 33 U.S.C. §§ 1311(b)(1)(A), 1314(b)(1)(A), 1314(b)(1)(B) (specifying BPT applicability, timeline, and factors), *with id.* §§ 1311(b)(2)(A), (C), (D) & (F), 1314(b)(2)(B) (specifying BAT applicability, timelines, and factors); *see also* 80 Fed. Reg. 67,843 (distinguishing BPT and BAT).

Yet, in the face of this statutory structure, the rule sets BAT for leachate “equal to the [prior] BPT limitation”—*i.e.*, impoundments. 80 Fed. Reg. 67,854. The rule reaches that decision without explaining why a technology selected in 1982 under the laxer BPT standard somehow meets the stricter BAT standard today. That is particularly inexplicable given the rule’s recognition that impoundments have proven “largely ineffective” at pollution control over the past decades, *id.* at 67,840, 67,851-53; *see supra* I.B. And, as we have seen, it was the recognized shortcomings of impoundments—shortcomings with respect *1026 to leachate discharges as well as other wastestreams—that led the agency to revise the steam-electric effluent guidelines in the first place. *Id.* at 67,840; *supra* I.B.

To be sure, we do not say that EPA is precluded by the Act from *ever* setting BAT equivalent to a prior BPT standard. But given the plain distinction between the two

standards marked out in the Act, the agency would at least have to offer some explanation for its decision that speaks to the statutory differences between BAT and BPT. Here we are given nothing along those lines. Consequently, the only conclusion we can draw from this record is that, in setting BAT for leachate, the agency simply defaulted to the prior BPT. As explained, however, the statutory scheme does not confer authority on the agency to collapse the carefully-wrought distinction between BAT and BPT in this manner. *See, e.g., Texas v. United States*, 497 F.3d 491, 501 (5th Cir. 2007) (“*Chevron* deference comes into play, of course, only as a consequence of statutory ambiguity, and then only if the reviewing court finds an implicit delegation of authority to the agency.”).

^[13]We also agree with petitioners that the agency’s proffered justifications for the leachate rule are not supported—indeed, are likely incompatible with—the factors set forth under the Act for determining BAT. “The first [*Chevron* step] determines whether Congress intended to give the agency any discretion,” *La Union Del Pueblo Entero v. FEMA*, 608 F.3d 217, 220 (5th Cir. 2010), and we are unpersuaded that Congress gave the EPA discretion to rely on justifications like these. As explained, the agency excuses its lax leachate BAT by appealing to (1) the relatively “small” amount of pollutants discharged in leachate, and (2) the stricter BATs set for larger industry wastestreams. *See* 80 Fed. Reg. 67,854. Yet neither of these considerations implicates any of the factors the Act requires the Administrator to consider in determining BAT for a given point source. *See* 33 U.S.C. § 1314(b)(2)(B) (requiring that regulations “shall take into account” specified “[f]actors relating to the assessment of best available technology” with respect to “any point source ... within such categories or classes”).

The Act specifies the following BAT factors:

[1] the age of equipment and facilities involved, [2] the process employed, [3] the engineering aspects of the application of various types of control techniques, [4] process changes, [5] the cost of achieving such effluent reduction, [6] non-water quality environmental impact (including energy requirements), and [7] such other factors as the Administrator deems appropriate[.]

Id. (brackets added). These factors cannot be stretched to accommodate the agency’s rationales for its leachate BAT. That is, no factor allows the agency to consider the amount of pollutants generated by a one wastestream relative to other streams. Nor does any factor allow the agency to consider whether less stringent regulation of one wastestream may be set off against the benefits of regulating *other* streams more strictly. *See, e.g., Tex. Oil & Gas Ass’n*, 161 F.3d at 928 (explaining that “CWA

specifies several factors that *must* be considered by the EPA in determining BAT limits” (emphasis added)). Thus, on their face, the justifications for the leachate BAT put forward in the rule fall outside of the factors mandated by the Act for determining BAT. *See, e.g., API II*, 858 F.2d at 264 (“Before EPA selects BAT-level limitations, it is *required* to address both (1) operational considerations, including ‘the process employed, the engineering aspects of the application of various types of control techniques [and] process changes,’ and (2) cost” (emphasis added)).

***1027** What is more, the agency’s benefit-weighting appears incompatible with the BAT factors and with the broader statutory scheme. Whether BAT factors always preclude weighing regulatory benefits against other considerations is an open question. *See Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 221, 129 S.Ct. 1498, 173 L.Ed.2d 369 (2009) (declining to resolve whether “cost-benefit analysis is precluded under the [BAT] ... test[]”).²⁶ We need not address that question here, because we conclude that the agency’s benefit-weighting in this case contravenes the statute. As explained, the rule explicitly justifies a less stringent BAT for leachate by touting the benefits of stricter BATs for *other* wastestreams. But the Act does not permit the agency to set a BAT by playing one pollution source off against another. As petitioners point out, the Act instead requires a BAT determination to be made with respect to a discrete “point source.” 33 U.S.C. § 1314(b)(2)(B). A “point source” is defined as “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.” *Id.* § 1362(14). This broad definition easily includes leachate, and the rule leaves no doubt that it treats leachate as a distinct point source. *See* 80 Fed. Reg. 67,847 (treating “combustion residual leachate” from landfills or impoundments as a separate wastestream). The Act thus specifically requires the BAT factors be applied with respect to a specific point source—here, leachate. *See* 33 U.S.C. § 1314(b)(2)(B) (providing that regulations “shall ... specify factors to be taken into account in determining the best measures and practices available to comply with [the BAT requirements in § 1311(b)(2)] *applicable to any point source* ... within such category or classes” (emphasis added)). But in the final rule the agency has explicitly factored into its BAT determination the regulation of wastestreams other than leachate, which contravenes the plain text and structure of the Act.

¹⁴EPA’s principal argument in response is that the Act

allows consideration of “other factors as the Administrator deems appropriate,” 33 U.S.C. § 1314(b)(2)(B), which permits it to consider the “very small” size of leachate pollution relative to the overall industry. Because leachate represents only about 3 percent of overall industry pollution, EPA claims, the rule still represents “reasonable progress” towards eliminating pollution because of the rule’s regulation of ***1028** other sources. *See* 33 U.S.C. § 1311(b)(2)(A). Even accepting EPA’s characterization of leachate pollution as “very small” (something we address at *Chevron* step two, *infra*), we reject the agency’s reliance on the “other factors” clause. Like any statute, we must interpret the Clean Water Act by “looking at the full text of the statute, rather than one isolated clause, along with the statute’s structure and its public safety purpose[.]” *United States v. Transocean Deepwater Drilling, Inc.*, 767 F.3d 485, 496 (5th Cir. 2014). As petitioners correctly point out, the agency’s “other factors” argument would undermine the concept of BAT altogether. The BAT factors are designed to support achievement of an effluent limitation that “shall require the elimination of discharges of all pollutants,” if “technologically and economically achievable.” 33 U.S.C. § 1311(b)(2)(A) (citing *id.* § 1314(b)(2)). But accepting the agency’s expansive view of the “other factors” clause would allow it, in *every* case, to justify a less stringent BAT for one pollution source by claiming it was regulating *other* sources more strictly and thus making reasonable progress in the industry “as a whole.” On this understanding, the BAT standard would cease to have any meaning. We therefore reject EPA’s reliance on the “other factors” clause to support its justification for the leachate regulation.²⁷

In sum, we conclude that the BAT determination for leachate fails step one of *Chevron*.

2.

¹⁵ ¹⁶ ¹⁷Alternatively, we conclude that the leachate regulation fails step two of *Chevron*. For purposes of this analysis, we assume that the CWA is “silent or ambiguous” with respect to the question addressed by the rule, and we ask only “whether the agency’s answer is based on a *permissible* construction of the statute.” *Acosta*, 909 F.3d at 730 (quoting *City of Arlington*, 569 U.S. at 296, 133 S.Ct. 1863; *Chevron*, 467 U.S. at 843, 104 S.Ct. 2778). “We do not simply impose our own construction on the statute.” *BNSF Ry. Co. v. United States*, 775 F.3d 743, 751 (5th Cir. 2015) (cleaned up) (quoting *Chevron*, 467 U.S. at 843, 104 S.Ct. 2778). “The agency’s view ‘governs if it is a reasonable interpretation

of the statute—not necessarily the only possible interpretation, nor even the interpretation deemed most reasonable by the courts.’ ” *Acosta*, 909 F.3d at 735 (quoting *Coastal Conserv’n Ass’n v. U.S. Dep’t of Commerce*, 846 F.3d 99, 106 (5th Cir. 2017); *Riverkeeper*, 556 U.S. at 218, 129 S.Ct. 1498). While this is a highly deferential standard, an agency interpretation can fail *Chevron* step two if “it is contrary to clear congressional intent or frustrates the policy Congress sought to implement.” *Garcia-Carias v. Holder*, 697 F.3d 257, 271 (5th Cir. 2012). Agency action that is “arbitrary, capricious, or manifestly contrary to the statute” also fails step two. *Tex. Coal. of Cities for Util. Issues v. FCC*, 324 F.3d 802, 807 (5th Cir. 2003) (quoting *Chevron*, 467 U.S. at 844, 104 S.Ct. 2778). Because *Chevron* step two and the APA share the “arbitrary and capricious” standard, “[t]he APA reflects the principles of *Chevron*,” and analysis under the two standards proceeds similarly. *Nutraceutical Corp. v. Von Eschenbach*, 459 F.3d 1033, 1038 (10th Cir. 2006); see also, e.g., *PIERCE* § 3.6 (suggesting that *Chevron* step two has “complete overlap” *1029 with APA test of whether a rule adopts an “unreasonable” statutory interpretation) (quoting *Animal Legal Def. Fund v. Glickman*, 204 F.3d 229, 234 (D.C. Cir. 2000)).

^{138]}Petitioners argue that the agency’s decision to set surface impoundments as BAT for leachate is based on an impermissible interpretation of the Act. They raise arguments similar to the ones raised under step one—i.e., that the agency acted unreasonably by setting a leachate BAT based on its relative size and on the rule’s stricter regulation of other streams. Additionally, petitioners argue that the agency rejected more effective, achievable control technologies (like chemical precipitation) in favor of a less effective technology like impoundments, which “is unreasonable because it cannot be squared with Congress’s intent for BAT to be more stringent than BPT limits.” We agree with petitioners that the leachate regulation is based on an impermissible interpretation of the Act. We therefore hold that the regulation fails *Chevron* step two and must be vacated on that alternative basis as well.

First, the rule unreasonably sets as BAT a technology the rule itself deems ineffective at controlling toxic discharges from leachate. As already explained, *supra* V.B.1, the final rule categorically recognizes that impoundments are ineffective at removing toxic pollutants from wastewater, 80 Fed. Reg. 67,840, 67,851, which is why the rule declined to set impoundments as BAT for five of the six wastestreams at issue, *id.* at 67,852-53. Nothing in the rule even hints, much less explains, that impoundments are somehow better at

controlling harmful discharges from leachate. To the contrary, the rule recounts that groundwater contamination from impoundments (which are “the most widely used systems to treat ... leachate”) has resulted in numerous documented cases of drinking water pollution. *Id.* at 67,840, 67,847; see also *id.* at 67,847 (defining “leachate” as “liquid ... that has percolated through or drained from waste or other materials placed in a landfill, or that passes through the containment structure ... of a surface impoundment”); *id.* (explaining that “[u]nlined impoundments and landfills ... allow the leachate to potentially migrate to nearby ground waters, drinking water wells, or surface water”). The rule also refers to an environmental assessment document, *id.* at 67,840, which reports that “[c]ombustion residual leachate can migrate from the site in the ground water at concentrations that could contaminate public or private drinking water wells and surface waters, even years following disposal of combustion residuals.” See *Environmental Assessment Document* No. EPA-821-R-15-006, § 3.3.2. Given these admitted deficiencies in impoundments, it was unreasonable to adopt them as BAT for leachate. See *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856 (“Normally, an agency rule would be arbitrary and capricious if the agency has ... offered an explanation for its decision that runs counter to the evidence before the agency.”).

Second, the rule unreasonably declines to set as BAT available technologies that are admittedly more effective at controlling leachate discharges. We have already detailed the rule’s affirmation that available modern technologies like chemical precipitation “are more effective than surface impoundments at removing both soluble and particulate forms of metals.” 80 Fed. Reg. 67,851; *supra* V.B.1. The rule never explains why this blanket statement does not apply to the use of impoundments to treat leachate. Indeed, EPA acknowledged during the rulemaking process that “chemical precipitation is an available and demonstrated technology for the treatment of combustion residual leachate.” See *EPA’s Response to Public Comments*, SE05958, at 7-20. And EPA’s *1030 counsel conceded at oral argument that chemical precipitation is “available” as a treatment for leachate. Oral Argument Audio at 22:25-22:45 (Oct. 3, 2018). As with its treatment of legacy wastewater, the rule appears to select a BAT for leachate simply by defaulting to the decades-old and demonstrably ineffective BPT standard. We have already explained that this kind of regulation-by-inertia is inconsistent with the “technology-forcing” mandate of the CWA. See *NRDC II*, 808 F.3d at 563-64; *NRDC I*, 822 F.2d at 123; *supra* V.B.1. Moreover, a decision to leave BPT limitations in place for leachate, when those limitations were based on admittedly ineffective

technology, does not reflect “a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges,” which was the intent of Congress in enacting BAT standards in the first place. *Nat’l Crushed Stone Ass’n*, 449 U.S. at 74, 101 S.Ct. 295. The EPA’s decision to rest on its laurels (questionable as they are) respecting leachate thus “frustrates the policy Congress sought to implement” in the CWA, *see Garcia-Carias*, 697 F.3d at 271, and cannot stand.

Our decision in *Chemical Manufacturers Association v. EPA*, 870 F.2d 177, reinforces our conclusion on this point. That case involved a challenge to BAT and NSPS regulations set for water pollution by organic chemicals and synthetics plants. *Id.* at 261. In setting NSPS limits for these plants, EPA did not consider recycling as a possible NSPS technology, even though the evidence before it showed that plants could achieve zero discharge by using recycling. *Id.* at 262-63. We concluded that the agency’s failure even to consider recycling, an “available demonstrated technology,” was arbitrary and capricious. *Id.* at 264. Our case is analogous: here we have the known shortcomings of the status quo technology (impoundments), and the demonstrated superiority of available alternatives (chemical precipitation). To be sure, EPA was entitled to deference on NSPS standards just as it is on BAT standards, *id.* at 263, but deference runs out when the agency fails to consider an option with all the indicators of being a superior choice. Just so here. An “[u]nexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious,” and “[a]n arbitrary and capricious regulation of this sort is itself unlawful and receives no *Chevron* deference.” *Encino Motorcars, LLC v. Navarro*, — U.S. —, 136 S.Ct. 2117, 2126, 195 L.Ed.2d 382 (2016) (citing *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 981, 125 S.Ct. 2688, 162 L.Ed.2d 820 (2005); *United States v. Mead Corp.*, 533 U.S. 218, 227, 121 S.Ct. 2164, 150 L.Ed.2d 292 (2001)).

Finally, we note that the EPA has described leachate as being chemically similar to FGD wastewater, a wastestream admittedly susceptible to effective treatment by chemical and biological methods. *See* 80 Fed. Reg. 67,851; *see also EPA’s Response to Public Comments*, SE05958, at 7-20. It puzzles us that the EPA has described two wastestreams as chemically similar, and susceptible to treatment by the same methods, and yet has set strikingly different BAT standards for each. As with legacy wastewater, the agency’s rationales contradict themselves. The BAT determination for leachate is “illogical on its own terms” and therefore cannot stand. *See, e.g., GameFly*, 704 F.3d at 148 (D.C. Cir. 2013)

(facially illogical determinations are arbitrary and capricious).

EPA offers two justifications for selecting impoundments as BAT for leachate—the first based on the agency’s lack of data about alternatives, and the second based on the relative size of the leachate wastestream. We find neither persuasive.

First, we are unpersuaded by the agency’s argument that “[c]ommentators did *1031 not provide information that EPA could use to establish BAT limitations” concerning leachate. 80 Fed. Reg. at 67,854. During its lengthy study period beginning in 2005, not only did EPA have adequate opportunity to collect data on various treatment options for leachate, but the agency *did* collect data on the size of leachate pollution and on the benefits of chemical precipitation. *See* 80 Fed. Reg. 67,854 (“EPA considered whether technologies in place for treatment of other wastestreams” could be used to treat leachate); *TDD*, EPA-821-R-15-007, at 10-39 (table showing potential reduction in leachate pollution of 33,800 toxic-weighted pound equivalents by adopting chemical precipitation). These data were certainly enough to demand further inquiry and, of course, they say nothing to justify setting *impoundments* as BAT.

^[19]We have before declined to accept lack of data as a valid excuse for an agency’s failure to regulate activity that concededly creates pollution, and we decline again here. In *API I*, for instance, we rejected EPA’s attempt to justify failing to regulate “stripper gas wells” based on its claim that “there was not sufficient data” to justify regulation. 661 F.2d at 357. We reasoned that, in the three years since EPA had declined to regulate, ample public data on the wells “belie[d] EPA’s contention that there exists nothing to regulate.” *Id.* We therefore remanded for further agency consideration “in light of this new information.” *Id.* Here, impoundments have been in operation for over three *decades*, and, as we have discussed at length, the agency’s own rule amply demonstrates their ineffectiveness in controlling discharges from wastestreams including leachate. The agency cannot rely on a lack of data to justify its setting a BAT standard based on demonstrably outdated and ineffective technology.²⁸

^[20]EPA counters this point by asserting that it “identified *no* existing plants using chemical precipitation to treat their leachate.” We take EPA at its word, as we must, but the agency misses the point. Under our precedent, a technological process can be deemed “available” for BAT purposes “even if it is not in use at all,” or if it is used in unrelated industries. *API II*, 858 F.2d at 265. “Such an

outcome is consistent with Congress'[s] intent to push pollution control technology." *Id.* In this case, technologies alternative to surface impoundments are in use in the steam-electric industry, just in separate wastestreams. *See, e.g.*, 80 Fed. Reg. 67,855 n.29. If technologies from other industries can be considered, then, *a fortiori*, technologies within the same industry should be considered when the status quo technology in place for a wastestream is admittedly ineffective. The final rule itself recognizes this point. *See* 80 Fed. Reg. 67,843 ("BAT is intended to reflect the *1032 highest performance in the industry, and it may reflect a higher level of performance than is currently being achieved based on technology transferred from a different category or subcategory, bench scale or pilot studies, or foreign plants." (citing *Am. Paper Inst. v. Train*, 543 F.2d 328, 353 (D.C. Cir. 1976); *Am. Frozen Food Inst. v. Train*, 539 F.2d 107, 132 (D.C. Cir. 1976))). In any event, EPA's argument ignores the fact that during notice-and-comment it *admitted* that "chemical precipitation is an available and demonstrated technology for the treatment of combustion residual leachate," based on the technology's use in treating a similar wastestream (FGD wastewater). *See EPA's Response to Public Comments*, SE05958, at 7-20.

^[21]Second, we reject the EPA's argument that its regulation is justified by the fact that leachate pollution constitutes "a very small portion of the pollutants discharged collectively by all steam power plants." 80 Fed. Reg. 67,854. As already explained at step one, *supra* V.B.1, this consideration finds scant support in the statutory scheme given that the relative size of a stream is absent from the statutory BAT factors. But even assuming the statute allows the agency to consider the relative size of a pollution source in setting BAT, we find the EPA's use of that consideration here to be unreasonable.

The agency's argument involves some sleight of hand. Leachate discharges may constitute "a very small portion" of pollutants, 80 Fed. Reg. 67,854, but only by comparison to *all* pollution from the *entire* steam-electric power plant industry, which is largest collective source of water pollution in the country. *Id.* at 67,839-40.²⁹ In an absolute sense, however, leachate pollution is not a "very small portion" of anything. If leachate were a separate industry, it would rank as the 18th-largest source of water pollution in the United States. *See TDD*, EPA-821-R-15-007, at 10-39 (table showing toxic-weighted pollution from leachate); *Annual Effluent Guidelines Review Report*, EPA-821-R-16-002, at 2-26 (listing pollution from other industries). Leachate alone produces more toxic-weighted pound equivalents than the entire coal mining industry, according to the EPA's own records. *Id.* And EPA's brief grudgingly admits that leachate pollution "might be

considered comparable" to the total amount of pollution coming from other industries such as coal mining and sugar processing. Thus, with the distortions stripped away, EPA's "argument" for its leachate regulation turns out to be a mere statement of fact, and an empty one at that. Yes, leachate pollution may form a "very small portion" of a gargantuan source of water pollution. But leachate constitutes a gargantuan source of water pollution on its own terms. Both statements are true. Neither begins to justify the agency's choice of impoundments as BAT.³⁰

*1033 At oral argument, EPA conceded that it lacked discretion to ignore leachate based on its allegedly small size, instead arguing it *had* regulated leachate—*i.e.*, by setting BAT based on surface impoundments. Oral Argument Audio at 22:10-22:20. Thus we end where we began. The final rule itself tells us that surface impoundments have a poor record at controlling toxic water pollution. 80 Fed. Reg. 67,840. The agency's own comments tell us that "chemical precipitation is an available and demonstrated technology for the treatment of combustion residual leachate." Faced with these concessions, we must conclude that the leachate regulation rests on an impermissible interpretation of the Clean Water Act and therefore fails *Chevron* step two.³¹

V. Conclusion

In the Clean Water Act, Congress afforded EPA considerable policy-making discretion to formulate rules to mitigate pollution in our nation's waters. As a price for that delegation of authority, however, the agency must engage in "reasoned decisionmaking," *Michigan v. EPA*, 135 S.Ct. at 2706, and "stay[] within the bounds of its statutory authority." *Utility Air Reg. Grp. v. EPA*, 573 U.S. 302, 315, 134 S.Ct. 2427, 189 L.Ed.2d 372 (2014) (internal quotation marks and citations omitted). The regulations challenged in this case fall short of those judicially-enforceable limits on the exercise of agency discretion. We therefore conclude that the portions of the final rule regulating legacy wastewater and residual combustion leachate are unlawful. Accordingly, we vacate those portions of the rule and remand to the agency for reconsideration consistent with this opinion.

VACATED IN PART AND REMANDED.

All Citations

920 F.3d 999

Footnotes

- 1 Under the Act “pollutant” means “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial municipal, and agricultural waste discharged into water.” 33 U.S.C. § 1362(6). “Pollution” means “the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.” *Id.* § 1362(19). “Discharge of a pollutant” means “(A) any addition of any pollutant to navigable waters from any point source, [and] (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.” *Id.* § 1362(12).
- 2 See, e.g., *CMA*, 870 F.2d at 195-96 (describing the CWA’s (1) grants-in-aid for publicly-owned waste-treatment works, 33 U.S.C. §§ 1281-88, 1291-92; (2) authorization to set and enforce federal effluent standards, *id.* §§ 1311, 1314; (3) requirement of state-established and federally-approved water-quality criteria, *id.* § 1313; and (4) creation of pollution permitting through the National Pollutant Discharge Elimination System (NPDES), *id.* § 1342; see also, e.g., *Tex. Oil & Gas Ass’n v. EPA*, 161 F.3d 923, 927-29 (5th Cir. 1998) (“*Tex. Oil & Gas*”) (discussing effluent limitations and NPDES permitting); *API I*, 661 F.2d at 341-42, 343-44 (discussing effluent limitations); see also generally *EPA v. Nat’l Crushed Stone Ass’n*, 449 U.S. 64, 69-70, 101 S.Ct. 295, 66 L.Ed.2d 268 (1980) (outlining basic structure of CWA).
- 3 A “point source” means “any discernible, confined and discrete conveyance ... from which pollutants are or may be discharged,” but “does not include agricultural stormwater discharges and return flows from irrigated agriculture.” 33 U.S.C. § 1362(14). An “effluent limitation” means “any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.” *Id.* § 1362(11).
- 4 The Act is not based solely on technological feasibility standards. It also incorporates water-quality standards into the permitting process that effectuates ELGs. See, e.g., *NRDC II*, 808 F.3d at 564-65 (“If the [ELGs] are insufficient to attain or maintain water quality standards, the CWA requires NPDES permits to include additional water quality-based effluent limits[.]” (citing 33 U.S.C. §§ 1311(b)(1)(C), 1312(a); *NRDC I*, 822 F.2d at 110)).
- 5 The complete list of BPT factors is:
 - Total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application;
 - Age of equipment and facilities involved;
 - Process employed;
 - Engineering aspects of the application of various types of control techniques;
 - Process changes;
 - Non-water quality environmental impact (including energy requirements); and
 - “[S]uch other factors as the Administrator deems appropriate.”
 33 U.S.C. § 1314(b)(1)(B).
- 6 The complete list of BAT factors is:
 - Age of equipment and facilities involved;
 - Process employed;
 - Engineering aspects of the application of various types of control techniques;
 - Process changes;
 - Cost of achieving such effluent reduction;
 - Non-water quality environmental impact (including energy requirements); and
 - “[S]uch other factors as the Administrator deems appropriate.”
 33 U.S.C. § 1314(b)(2)(B).
- 7 BAT and BPT standards apply to regulation of *existing* steam-powered electric plants. A standard even stricter than BAT—the “new source performance standard” (“NSPS”)—applies to newly built plants. The Act defines this standard as “the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.” 33 U.S.C. § 1316(a)(1). Additional standards of varying strictness are laid out for other potential pollution sources, such as “pretreatment standards for existing sources” (“PSES”). See 33 U.S.C. § 1314(g).

- 8 The study produced a 233-page report. *See Steam Electric Power Generating Point Source Category: Final Detailed Study Report*, EPA 821-R-09-008 (Sept. 2009) (“EPA Study Report”). The report vividly describes the harms from water pollution—for instance, one dissolved metal, selenium, can kill fish and other aquatic life at “concentrations below eight parts per billion.” *Id.* at 6-4.
- 9 Each stream may be briefly described as follows (*see id.* at 67,846-47):
- **FGD wastewater** is produced by systems that remove sulfur dioxide from flue gas using a “sorbent slurry.”
 - **Fly ash wastewater** is produced when ash in flue gas is emitted from a boiler, trapped by filters, and then sluiced from hoppers to a surface impoundment.
 - **Bottom ash wastewater** is produced when ash falling to the furnace bottom is sluiced by water from hoppers to an impoundment or dewatering bin.
 - **FGMC wastewater** is produced when carbon is injected into flue gas to facilitate removal of mercury and the resulting waste is wet sluiced with fly ash.
 - **Leachate** is liquid that percolates through or drains from a landfill, or that passes through the containment structure (e.g., bottom, dikes, berms) of an impoundment.
 - **Gasification wastewater** is produced by the cleaning of a synthetic gas produced by subjecting coal or coke to high temperature and pressure.
- 10 The rule addresses a seventh wastestream—“nonchemical metal cleaning wastes”—not at issue here. 80 Fed. Reg. 67,850.
- 11 “Indirect” discharges concern pollutants discharged into a “publicly owned treatment work” and are subject to distinct “pretreatment” standards. *See* 80 Fed. Reg. 67,841; 33 U.S.C. § 1317(b), (c).
- 12 *See* 33 U.S.C. § 1369(b)(1)(E) (allowing “any interested person” to file in a federal circuit court an application for review of the Administrator’s “promulgating any effluent limitation” under §§ 1311 or 1314 within 120 days of the promulgation).
- 13 The Industry Petitioners are Utility Water Act Group (“UWAG”), Southwestern Electric Power Company, Union Electric Company dba Ameren Missouri, City of Springfield, Missouri, by and through the Board of Public Utilities, and Duke Energy Indiana, Inc.
- 14 The Water Company Petitioners are the American Waterworks Association and the National Association of Water Companies.
- 15 The Environmental Petitioners are Waterkeeper Alliance, Inc., the Environmental Integrity Project, and the Sierra Club.
- 16 *See* United States Judicial Panel on Multidistrict Litigation, Order MCP No. 136 (December 8, 2015). The cases were originally captioned as: *Waterkeeper Alliance, Inc. et al v. EPA, et al.* (2nd Cir. No. 15-3773); *Southwestern Elec. Power Co., et al. v. EPA, et al.* (5th Cir. No. 15-60821); *Union Elec. Co., et al. v. EPA, et al.* (8th Cir. No. 15-3658), and *Sierra Club v. EPA.* (9th Cir. No. 15-73578).
- 17 The agency’s reconsideration of those aspects of the rule has been challenged in separate lawsuits brought by a coalition of environmental groups, including some of the petitioners in this case. That challenge was brought contemporaneously in the District of Columbia federal district court and the D.C. Circuit. The district court ruled it lacked jurisdiction, *Clean Water Action v. Pruitt*, 315 F.Supp.3d 72, 85 (D.D.C. 2018), and the D.C. Circuit transferred its case to this court, *Clean Water Action v. Pruitt*, No. 17-1216, Order (D.C. Cir. Feb. 1, 2018), where it is now pending as No. 18-60079. The Environmental Petitioners concede that the challenge to the EPA’s reconsideration decision involves distinct issues that do not affect this case, and no party has asked us to postpone our decision here.
- 18 While no party contests the issue, we conclude that petitioners have associational standing to challenge the final rule on behalf of their members. *See, e.g., La. Landmarks Soc., Inc. v. City of New Orleans*, 85 F.3d 1119, 1122 n. 3 (5th Cir. 1996) (explaining that “standing is jurisdictional and, therefore, non-waivable”); *Assoc. of Am. Phys. & Surgeons v. Tex. Med. Bd.*, 627 F.3d 547, 550 (5th Cir. 2010) (associational standing present when (1) members would have standing; (2) association seeks to protect interests germane to its purpose; and (3) neither claim nor relief requires individual participation). Members of the petitioner organizations attest in declarations to cognizable injuries-in-fact traceable to the discharges at issue—such as negative impact on property and decrease in enjoyment of waterways—that could be redressed by a decision requiring reevaluation of the rule. *See, e.g., Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 183, 120 S.Ct. 693, 145 L.Ed.2d 610 (2000) (sufficient injury-in-fact when plaintiffs “aver that they use the affected area and are persons for whom the aesthetic and

recreational values of the area will be lessened by the challenged activity"); *Sierra Club, Lone Star Chapter v. Cedar Point Oil Co. Inc.*, 73 F.3d 546, 557 (5th Cir. 1996) (traceability established by allegations that pollutants "cause[] or contribute[] to the kinds of injuries alleged by the plaintiffs"). Finally, we find the second and third prongs of associational standing test are met here because petitioners seek to protect environmental interests germane to their purposes and individual participation by each affected member is unnecessary. *Assoc. of Am. Phys. & Surgeons*, 627 F.3d at 550.

- 19 Indeed, for treatment of gasification wastewater the inadequacies of surface impoundments appear even more pronounced. EPA found that one of the three existing U.S. plants that produce gasification wastewater previously used surface impoundments but that "the impoundment effluent repeatedly exceeded its NPDES permit effluent limitations necessary to meet applicable [Water Quality Standards]." *Id.* at 67,853.
- 20 Intervenor UWAG argues that "EPA's acknowledgment that other technologies are better at removing *dissolved* metals does not undermine the Agency's conclusion that surface impoundments reflect BAT for [pollutants] in legacy wastewaters." We disagree. In this context, the EPA's pointed criticisms of impoundments fatally undermine its BAT determination. To be sure, an agency has "some leeway reasonably to resolve uncertainty, as a policy matter, in favor of more regulation or less." *Ctr. for Auto Safety v. Fed. Highway Admin.*, 956 F.2d 309, 316 (D.C. Cir. 1992). But there is no uncertainty in this record about the shortcomings of impoundments. EPA may have been uncertain about what the precise BAT for legacy wastewater should be, but the record fails to explain why impoundments are BAT, if that term is to have any meaning. Furthermore, if chemical precipitation or biological treatment are technically feasible but simply too costly for treating legacy wastewater, the EPA could have said so. It did not. We cannot defend the agency's action based on a rationale the agency did not rely on. *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856.
- 21 Intervenor UWAG offers a similarly mistaken defense of the rule by arguing that the timing of wastewater generation "profoundly influence[s] the amount of wastewater, the characteristics of that wastewater, and the technologies available to treat it." This may be true, but the question before us is not whether legacy wastewater must be regulated in the same manner as other wastewater. The question is whether impoundments are BAT for legacy wastewater, and the agency's own words cast grave doubt on that conclusion. Additionally, UWAG's argument that treating legacy wastewater as a "separate wastestream" was not itself arbitrary and capricious is beside the point. Our criticism is directed at the BAT determination the agency actually reached for legacy wastewater, not at the decision to establish a separate BAT in the first place.
- 22 The final rule attempts to explain away this paradox, but its rationales do not hold water. The rule asserts that, if EPA subjected non-commingled legacy wastewater to stricter controls, plants "would begin commingling other process wastewater with their legacy [non-commingled] wastewater" and thereby circumvent the regulation. *Id.* at 67,855. Perhaps or perhaps not. But the current rule *already* permits plants to do precisely what the agency is concerned about—*i.e.*, mix wastewater with non-commingled wastewater. And if EPA is seriously concerned that more commingling would result from a stricter rule, it could avoid the problem by restricting commingling at plants where it was not already an established process. Additionally, the agency contends that stricter regulation for non-commingled legacy wastewater would create the harmful "incentive" for plants to discharge the wastewater "on an accelerated schedule" that "could result in temporary increases in environmental impacts." *Id.* But the agency fails to consider that such action would, at a minimum, require plants to seek modification of the NPDES permits. See 40 C.F.R. §§ 122.41(f)(1)(ii) (requiring permitted facilities to report any alteration in operations that "could significantly change the nature or increase the quantity of pollutants discharged"); 122.62(a)(1) (requiring modification of permits for "material and substantial alterations or additions to the permitted facility or activity (including a change or changes in the permittee's ... disposal practice)"). In any event, the central point remains: by including *non-commingled* legacy wastewater within its ambit, the final rule undercuts the key rationale supporting it—that EPA lacks sufficient data for *commingled* legacy wastewater.
- 23 EPA claims that petitioners have waived this deferral argument by failing to raise it during the notice-and-comment period. That argument is foreclosed by our precedent. See *Am. Forest & Paper Ass'n v. EPA*, 137 F.3d 291, 295 (5th Cir. 1998) ("EPA has failed to identify any provision in the CWA that suggests a party's failure to comment waives its right to seek judicial review.") (citing *City of Seabrook v. EPA*, 659 F.2d 1349, 1360 n.17 (5th Cir. 1981)). Our waiver precedents in this area are admittedly in conflict. See *BCCA Appeal Grp.*, 355 F.3d at 829 (acknowledging conflict); *Tex. Oil & Gas Ass'n*, 161 F.3d 923, 933 n.7 (finding waiver due to "failure to raise the objections during the notice and comment period."). We must follow the earlier precedent, however, which directly refutes the agency's waiver argument. When precedents conflict, "under our rule of orderliness, the earlier case controls." *GlobeRanger Corp. v. Software AG United States of Am., Inc.*, 836 F.3d 477, 497 (5th Cir. 2016).
- 24 See, e.g., *Tex. Oil & Gas Ass'n*, 161 F.3d at 923, 934-35 (rejecting challenge based on argument that EPA only "paid lip service to the age factor [in setting BAT]," because there was still a clear "rational relationship" between the factors considered and the BAT decision); *id.* at 935-36 (rejecting another challenge based on argument that EPA relied on a flawed scientific study, because

the study ultimately “had nothing to do with either the BAT determination or the actual inclusion of a zero discharge limit on produced water in the [guidelines]”; *API v. EPA*, 787 F.2d at 983 (rejecting challenge based on assertion that a scientific test relied on by the EPA was “unproven and unreliable,” when evidence suggested test was reliable); *CMA*, 885 F.2d at 262 (rejecting challenge on mathematical grounds to EPA’s statistical methodology because that methodology “was within [the agency’s] broad discretion in the choice of statistical techniques”); *id.* at 262-63 (separately rejecting argument that EPA did not properly consider the characteristics of diluted wastestreams in its studies leading up to BAT determination).

25 For that reason we also reject petitioners’ argument that EPA was required to set chemical precipitation as BAT solely because that method is technologically and economically achievable. Petitioners rely on a statement from *American Petroleum Institute v. EPA* that “the basic requirement for BAT effluent limitations is only that they be technologically and economically achievable[.]” 858 F.2d 261, 265-66 (5th Cir. 1988) (“*API II*”). As EPA explains, however, the sentence containing that phrase was deleted on rehearing. *See Am. Petroleum Inst. v. EPA*, 864 F.2d 1156, 1156 (5th Cir. 1989) (clarified on reh’g).

26 *Riverkeeper* held that a distinct CWA standard—“best technology available for minimizing environmental impact” (or “BTA”), 33 U.S.C. § 1326(b)—implicitly allows cost-benefit analysis. *See* 556 U.S. at 220, 129 S.Ct. 1498 (concluding BTA “does not unambiguously preclude cost-benefit analysis”). That decision, however, does not require finding that BAT also allows cost-benefit analysis. *Riverkeeper* focused on the specific BTA wording—“minimizing environmental impact”—which “admits of degree and is not necessarily used exclusively to refer to the ‘greatest possible [pollutant] reduction.’” *Id.* at 219, 129 S.Ct. 1498. *Riverkeeper* contrasted that wording with BAT, whose “plain language ... ‘require[s] the elimination of all pollutants.’” *Id.* (quoting 33 U.S.C. § 1311(b)(2)(A) (emphasis in original)). *Riverkeeper* also reasoned that other standards—like BAT—“are elucidated by statutory factor lists that guide their implementation,” unlike BTA. *Id.* at 221, 129 S.Ct. 1498 (citing, *inter alia*, 33 U.S.C. § 1314(b)(2)(B)). Finally, *Riverkeeper* expressly declined to resolve whether “cost-benefit analysis is precluded under the BAT[] ... test.” *Id.* at 221-22, 129 S.Ct. 1498 (stating “[i]t is not obvious to us that the ... proposition[] is correct, but we need not pursue that point”). Of course, we recognize that the BAT factors do require the agency’s consideration of “the cost of achieving such effluent reduction.” 33 U.S.C. § 1314(b)(2)(B).

27 EPA also argues that “BAT ... must be acceptable on the basis of numerous factors, only one of which is pollution control” (quoting *BP Expl. & Oil, Inc. v. EPA*, 66 F.3d 784, 796 (6th Cir. 1995)). That is true, but EPA has not offered any non-pollution-control factors showing impoundments are superior to chemical precipitation, let alone factors sufficient to outweigh the shortcomings of impoundments.

28 We find additional support for this conclusion in *Natural Resources Defense Council v. EPA*, 808 F.3d 556 (2nd Cir. 2015), which stands for the proposition that EPA’s failure to gather data on a technological option can be arbitrary and capricious in itself. *Id.* at 573-74. There, EPA studied and regulated ballast water discharges from ships. Rather than consider onshore treatment systems for ballast water, the agency limited its consideration to *shipboard* treatment systems, foreclosing any discussion on onshore treatment. *Id.* at 573. EPA later pleaded lack of data as a justification for not adopting onshore treatment systems as BAT. *Id.* The Second Circuit rejected that argument, holding that the lack of data was “a problem of EPA’s own making.” *Id.* at 573-74. The decision is analogous to our case. While here we do not have evidence that EPA actively sought to suppress data collection, *cf.* 808 F.3d at 573, nonetheless EPA had both the opportunity to gather data on leachate and a strong incentive to do so—namely, the recognized problems with impoundments in controlling discharge of toxic pollutants from leachate discharges. 80 Fed. Reg. 67,840.

29 After steam-electric power plants—the most polluting industry—the remaining nine industries in the top ten for water pollution are: 2) pulp, paper, and paperboard, 3) petroleum refining, 4) nonferrous metals manufacturing, 5) fertilizer manufacturing, 6) organic chemicals, plastics, and synthetic fibers, 7) ore mining and dressing, 8) inorganic chemicals manufacturing, 9) waste combustors, and 10) textile mills. *Environmental Assessment Document* No. EPA-821-R-15-006, at 3-15.

30 Additionally, we have previously rejected arguments by EPA that a certain pollution source need not be regulated because it was allegedly small or insignificant. In *API I*, 661 F.2d at 357, the EPA declined to subject a certain subcategory of wells, “stripper gas wells,” to the same control standards as other wells. The agency attempted to justify its decision by claiming stripper wells were “not a large problem” (as well as claiming it lacked data, *see supra*). *Id.* We rejected both arguments, pointing to evidence of the absolute number of stripper wells—not the pollution produced by those wells relative to the entire industry—and remarking that “[s]uch figures belie EPA’s contention that there exists nothing to regulate.” *Id.* The absolute number of stripper wells, not their number in proportion to the total number of oil and gas wells in the country, was what mattered. We have a similar situation here.

31 Relying on *Association of Pacific Fisheries v. EPA*, 615 F.2d 794 (9th Cir. 1980), Intervenor UWAG argues that the leachate BAT

was justified by EPA's "determination not to impose extraordinary costs on the industry for *de minimis* gains." *See id.* at 818 (holding that "at some point extremely costly more refined treatment will have a *de minimis* effect on the receiving waters"). We disagree. EPA made no such argument for its leachate BAT, and "[w]e may not supply a reasoned basis for the agency's action that the agency itself has not given." *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856. In any event, as we have explained, leachate is a massive pollution source in its own right. It would be arbitrary to claim the benefits of more strictly regulating it were *de minimis*, which is likely why EPA never made such an argument.

Message

From: Hoffer, Melissa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B497C7C804FB41E3BC952E3007F27870-HOFFER, MEL]
Sent: 5/18/2021 1:19:13 AM
To: Neugeboren, Steven [Neugeboren.Steven@epa.gov]
CC: Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]
Subject: RE: FOR YOUR REVIEW: Steam FGD Follow-up Analysis

Thank you very much.

From: Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Sent: Friday, May 14, 2021 9:51 PM
To: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Cc: Levine, MaryEllen <levine.maryellen@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>
Subject: Fwd: FOR YOUR REVIEW: Steam FGD Follow-up Analysis

Melissa - attached is analysis prepared to address the issues you and Benita raised at the last meeting. OST is setting up a follow up a meeting with you and Benita to discuss.

Let us know if you have any questions

Steve.

Steven Neugeboren
Associate General Counsel for Water
Environmental Protection Agency
Mails code 2355A
1200 Pennsylvania Ave, NW
Washington DC 20460
202-564-5488

Begin forwarded message:

From: "Nagle, Deborah" <Nagle.Deborah@epa.gov>
Date: May 14, 2021 at 6:20:29 PM EDT
To: "Best-Wong, Benita" <Best-Wong.Benita@epa.gov>, "Neugeboren, Steven" <Neugeboren.Steven@epa.gov>
Cc: "Wood, Robert" <Wood.Robert@epa.gov>, "Scozzafava, MichaelE" <Scozzafava.MichaelE@epa.gov>, "Damico, Brian" <Damico.Brian@epa.gov>, "Levine, MaryEllen" <levine.maryellen@epa.gov>
Subject: FOR YOUR REVIEW: Steam FGD Follow-up Analysis

Benita- Attached is the data analysis that OST staff conducted to evaluate the pollutant loadings from facilities with FGD discharges under multiple policy scenarios.

We have submitted a meeting request for next week 17-21 MAY to meet with you and Melissa to answer any questions about the analysis. Underlying data are included in the appendix.

I think the team did an exceptional job in a short period of time pulling this data analysis together and articulating the results. I hope you find the data analysis helpful for making a decision on how to proceed.

Steve – as per our conversation please share the attached data analysis with Melissa.

-Deborah

Deborah G. Nagle, Director
Office of Science and Technology
1200 Pennsylvania Ave, NW
Washington, DC 20460
Tel: (202) 564-1185

Appointment

From: Hoffer, Melissa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B497C7C804FB41E3BC952E3007F27870-HOFFER, MEL]
Sent: 6/21/2021 2:30:27 PM
To: Owscheduling [Owscheduling@epa.gov]
Subject: Accepted: Steam Electric 2020 Rule Decision for Reconsideration
Location: Microsoft Teams Meeting
Start: 6/24/2021 5:00:00 PM
End: 6/24/2021 5:30:00 PM
Show Time As: Busy

Appointment

From: Hoffer, Melissa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B497C7C804FB41E3BC952E3007F27870-HOFFER, MEL]
Sent: 6/22/2021 11:28:26 PM
To: Owscheduling [Owscheduling@epa.gov]
Subject: Accepted: Steam Electric 2020 Rule Decision for Reconsideration
Location: Microsoft Teams Meeting
Start: 6/24/2021 2:30:00 PM
End: 6/24/2021 3:00:00 PM
Recurrence: (none)

Message

From: Hoffer, Melissa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B497C7C804FB41E3BC952E3007F27870-HOFFER, MEL]
Sent: 7/21/2021 8:32:37 PM
To: Zomer, Jessica [Zomer.Jessica@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Draft Steam Declaration 7.19.21MAH.docx
Attachments: Draft Steam Declaration 7.19.21MAH.docx

J—looks good. Few edits attached and thanks. Good luck on the 5:00 pm call and let me know how it goes.

Thx,
M

Message

From: Hoffer, Melissa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B497C7C804FB41E3BC952E3007F27870-HOFFER, MEL]
Sent: 7/22/2021 1:52:52 PM
To: Zomer, Jessica [Zomer.Jessica@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
CC: Conger, Nick [Conger.Nick@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]
Subject: 7.21.2021 - Steam Electric Comms Plan v2.docx
Attachments: 7.21.2021 - Steam Electric Comms Plan v2.docx

Jessica / Mary Ellen,

I think this looks very good—flagging a section where I think we need to clarify what currently is in effect + what will remain in effect during the pendency of our review.

M